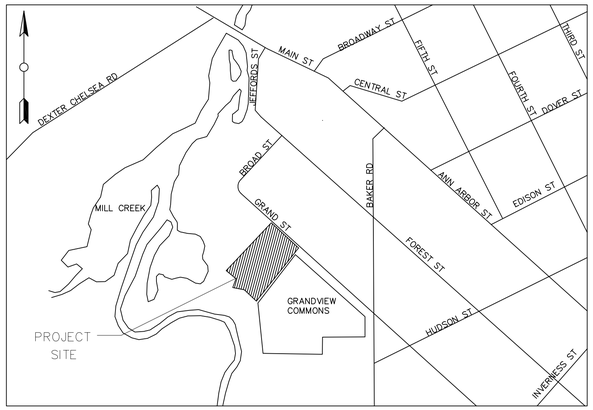
MILL CREEK FLATS

7965 & 7997 GRAND STREET
DEXTER, WASHTENAW COUNTY

PRELIMINARY SITE PLAN



LOCATION MAP
N.T.S.

VILLAGE OF DEXTER STANDARD NOTES

1. NOTIFY THE VILLAGE OF DEXTER AND THE VILLAGE ENGINEER A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. ALL CONSTRUCTION MUST CONFORM TO THE CURRENT ENGINEERING STANDARDS AND SPECIFICATIONS ADOPTED BY THE VILLAGE OF DEXTER.
3. NO PAVING OR EXCAVATION FOR PAVING SHALL BE ALLOWED UNTIL THE SANITARY SEWERS, WATER MAIN STORM SEWERS AND/OR COUNTRY DRAIN CLEAN OUT CONSTRUCTION HAS BEEN APPROVED BY THE VILLAGE.
4. CALL MISS DIG (800-482-7171) A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
5. ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ONSITE PRIOR TO THE START OF CONSTRUCTION.
6. ALL EXCAVATION UNDER THE INFLUENCE OF PAVEMENT, INCLUDING SIDEWALKS AND DRIVEWAYS, EXISTING OR PROPOSED, SHALL BE BACKFILLED AND COMPACTED WITH CLASS II SAND TO 95% OF MAXIMUM UNIT WEIGHT.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
8. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THE CONDITIONS THAT EXISTED PRIOR THE START OF CONSTRUCTION.
9. WORKING HOURS (INCLUDING RUNNING OF ANY MACHINERY) SHALL BE RESTRICTED TO MONDAY
10. THROUGH SATURDAY, 7:00 AM TO 7:00 PM; OR SUNUP TO SUNDOWN; WHICHEVER IS LESS.

LEGAL DESCRIPTION:
(Tax ID No. 08-08-06-285-005, 7965 Grand Street, Dexter; WD L 4742, P 951, WCR)
Part of the Northwest 1/4 of Section 6, Town 2 South, Range 5 East, Scio Township, Village of Dexter, Washtenaw County, Michigan, described as follows: Commencing at a railroad spike in the centerline intersection of Grand and Baker streets; thence North 48° 11' 00" West 686.14 feet along the centerline of Grand Street (99 feet wide) to the point of beginning; thence South 37° 25' 00" West 490.31 feet; thence North 49° 06' 00" West 74.89 feet; thence North 69° 53' 00" West 99.13 feet; thence North 37° 37' 00" East 528.13 feet to the centerline of Grand Street; thence along said centerline South 48° 11' 00" East 168.05 feet to the point of beginning.

LEGAL DESCRIPTION:
(Tax ID No. 08-08-06-285-008, 7997 Grand Street, Dexter; Stewart Title Commitment, Commitment 114835) Commencing at the intersection of the centerline of Baker Road with the centerline of Grand Street; thence North 47°59' West along said centerline of Grand Street, 854.19 feet for a PLACE OF BEGINNING; thence South 37°49' West, 496.17 feet; thence North 47°11' West, 68.86 feet; thence North 41°44' East, 493.87 feet to the centerline of Grand Street; thence South 47°59' West along said centerline, 34.96 feet to the PLACE OF BEGINNING; said parcel being a part of the Northwest 1/4 of Section 6, Town 2 South, Range 5 East.

COMPARISON CHART

	EXISTING	REQUIRED/ALLOWED	PROPOSED	
ZONING	VC	VC	PUD	
USES				
RESIDENTIAL	2 Unit	n/a	76 Units	
LOT REQUIREMENTS				
LOT AREA MIN GROSS	100,038 sf	9,000 sf	100,038 sf	
NET(EXCLUDING WETLAND)			97,738 sf	
MIN LOT WIDTH	206.50 ft	60 ft	206.50 ft	
BUILDING GROUND FLOOR AREA	4,510 sf	n/a	26,547 sf	
LOT COVERAGE	5%	60%	27%	
IMPERVIOUS AREA	n/a	n/a	60,519 sf	
IMPERVIOUS AREA TO NET AREA	n/a	n/a	62%	
BUILDING ENVELOPE				
FRONT	18.38 ft	15.00 ft	5.00 ft	*
REAR	165.43 ft	10.00 ft	54.89 ft	
SIDE WEST	0.83 ft	10.00 ft	11.75 ft	
SIDE EAST	38.00 ft	10.00 ft	10.84 ft	
SIDE SETBACK COMBINED	38.83 ft	20.00 ft	22.59 ft	
FRONTAGE BUILDOUT	27%	75%-90%	89%	
BUILDING REQUIREMENTS				
DWELLING UNIT FLOOR AREA	n/a	500 sf min	600 sf - 1200 sf	
GROUND FLOOR HEIGHT	n/a	12 ft min	15 ft	
BUILDING HEIGHT BUILDING 1	15 ft	45 ft	49.50 ft	
BUILDING HEIGHT BUILDING 2	15 ft	45 ft	50.40 ft	
BUILDING HEIGHT	1.00	Stories	3.00	
OFF STREET PARKING				
VEHICULAR PARKING 1.2 per unit w/o on street parking	n/a	91	85 on site	
			4 in ROW	
LOADING SPACE			1 in ROW	
ADA PARKING	n/a	4	4	
BICYCLE PARKING 1 per 20 parking spaces	n/a	4.6	10	**

*Reduced setback to better align with adjacent Grand View Commons
**Exterior bicycle parking only. Does not include interior spaces.

OWNER/PETITIONER/DEVELOPER:
GRAND DEVELOPMENT GROUP
MIKE PENN
8255 CASCADE STREET
COMMERCE TOWNSHIP, MI 48382
PHONE: 734-726-0810

CO -DEVELOPER:
MAVD
GREG COPP
2723 SOUTH STATE STREET SUITE 250
ANN ARBOR MICHIGAN 48104
PHONE: 734-930-6700

ARCHITECT
OX STUDIO
ROBB BURROUGHS,RA
2373 OAK VALLEY DR
ANN ARBOR, MI 43103
PHONE: 248-929-9000

ENGINEER:
MACON ENGINEERING, LLC
KATHY KEINATH, P.E.
PO BOX 314
CHELSEA, MI 48118
PHONE: 734-216-9941

WETLAND CONSULTANT:
MARX WETLANDS LLC
BRYANA GUEVARA
9861 HIGH MEADOW
YPSILANTI, MI 48198
PHONE: 734-478-8277

SURVEYOR:
PIATT LAND SURVEYING
JOHN PIATT, PS
PO BOX 374
CHELSEA, MI 48118
PHONE: 734-730-8570

SHEET INDEX

PRELIMINARY
NOT FOR CONSTRUCTION

811 Know what's below. Call before you dig.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

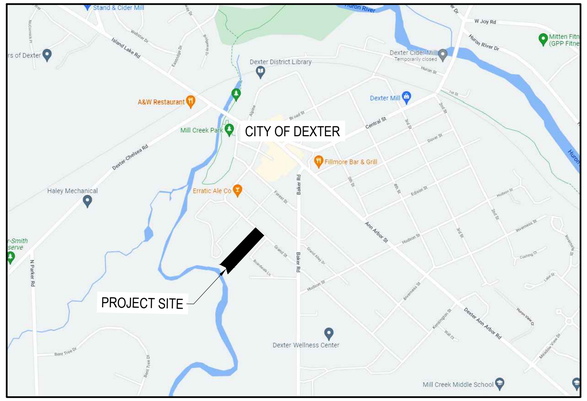
Macon Engineering, LLC.
P.O. Box 314, Chelsea, MI 48118 734-216-9941

GRAND STREET
DEXTER, MI
PRELIMINARY SITE PLAN
COVER

KATHY KEINATH ENGINEER No. 46053 STATE OF MICHIGAN PROFESSIONAL ENGINEER

DATE	7-11-23 5-5-23
SCALE	N.T.S.
SHEET NO.	PSP-01

VICINITY MAP *(NOT TO SCALE)*



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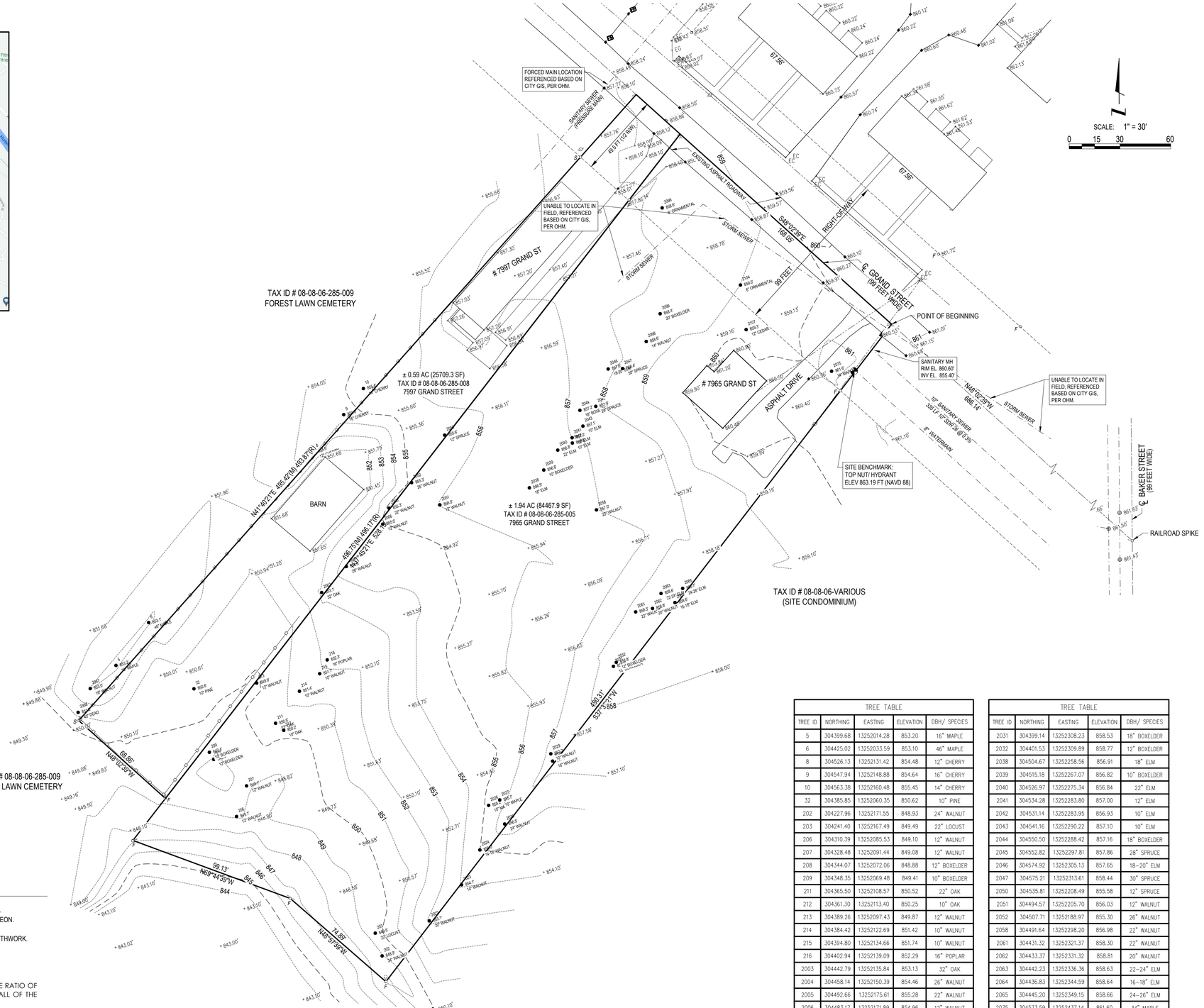
BASIS OF BEARING:
ORIENTED TO STATE PLANE COORDINATE SYSTEM, NAD 83, SOUTH ZONE (2113), WITH THE CENTERLINE OF GRAND STREET BEARING, N48°02'39"W FOR REFERENCE.

NOTES

1. HORIZONTAL DATUM IS ACCORDING TO STATE PLANE COORDINATES, NORTH AMERICAN DATUM OF 1983 (NAD 83), NORTH ZONE (2117).
2. VERTICAL DATUM IS ACCORDING TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), SITE BENCHMARK REFERENCED HEREON.
3. NO UTILITIES REFERENCED ON THIS PLAN. NO RESEARCH INTO UNDERGROUND UTILITY WAS PART OF SCOPE OF SERVICES.
4. MISS DIG UTILITY INVENTORY SHOULD BE COMPLETED ON SITE TO DELINEATE UNDERGROUND UTILITY CONNECTIVITY, PRIOR TO EARTHWORK.

CERTIFICATE:
I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND ABOVE PLATTED, AND OR DESCRIBED, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS OF SUCH SURVEY WAS NO GREATER THAN 1:5000, AND THAT ALL OF THE REQUIREMENTS OF P.A. 132, AS AMENDED, HAVE BEEN COMPLIED WITH.

STATE OF MICHIGAN
JOHN K PIATT
PROFESSIONAL SURVEYOR
No. 46681
REGISTERED PROFESSIONAL SURVEYOR



TREE TABLE				
TREE ID	NORTHING	EASTING	ELEVATION	DBH/ SPECIES
5	304399.68	13252014.28	853.20	16" MAPLE
6	304425.02	13252033.59	853.10	46" MAPLE
8	304526.13	13252131.42	854.48	12" CHERRY
9	304547.94	13252148.88	854.64	16" CHERRY
10	304563.38	13252160.48	855.45	14" CHERRY
32	304385.85	13252060.35	850.62	10" PINE
202	304227.96	13252171.55	848.93	24" WALNUT
203	304241.40	13252167.49	849.49	22" LOCUST
206	304310.39	13252085.53	849.10	12" WALNUT
207	304328.48	13252091.44	849.08	12" WALNUT
208	304344.07	13252072.06	848.88	12" BOXELDER
209	304348.35	13252069.48	849.41	10" BOXELDER
211	304365.50	13252108.57	850.52	22" OAK
212	304361.30	13252113.40	850.25	10" OAK
213	304389.26	13252097.43	849.87	12" WALNUT
214	304384.42	13252122.69	851.42	10" WALNUT
215	304394.80	13252134.66	851.74	10" WALNUT
216	304402.94	13252139.09	852.29	16" POPLAR
2003	304442.79	13252135.84	853.13	32" OAK
2004	304458.14	13252150.39	854.46	26" WALNUT
2005	304492.66	13252175.61	855.28	22" WALNUT
2006	304483.17	13252171.89	854.96	12" WALNUT
2022	304248.69	13252199.44	853.12	20" WALNUT
2023	304269.98	13252218.49	854.08	14" WALNUT
2024	304290.60	13252229.31	854.99	14-18" WALNUT
2025	304305.92	13252243.99	856.47	24" WALNUT
2026	304316.96	13252234.50	855.23	10" MAPLE
2027	304320.16	13252241.05	855.70	10" MAPLE
2028	304343.11	13252272.30	857.37	16" WALNUT
2029	304347.44	13252271.23	857.19	10" WALNUT

TREE TABLE				
TREE ID	NORTHING	EASTING	ELEVATION	DBH/ SPECIES
2031	304399.14	13252308.23	858.53	18" BOXELDER
2032	304401.53	13252309.89	858.77	12" BOXELDER
2038	304504.67	13252258.56	856.91	18" ELM
2039	304515.18	13252267.07	856.82	10" BOXELDER
2040	304526.97	13252275.34	856.84	22" ELM
2041	304534.28	13252283.80	857.00	12" ELM
2042	304531.14	13252283.95	856.93	10" ELM
2043	304541.16	13252290.22	857.10	10" ELM
2044	304550.50	13252288.42	857.16	18" BOXELDER
2045	304552.82	13252297.81	857.86	28" SPRUCE
2046	304574.92	13252305.13	857.65	18-20" ELM
2047	304575.21	13252313.61	858.44	30" SPRUCE
2050	304535.81	13252208.49	855.58	12" SPRUCE
2051	304494.57	13252205.70	856.03	12" WALNUT
2052	304507.71	13252188.97	855.30	26" WALNUT
2058	304491.64	13252298.20	856.98	22" WALNUT
2061	304431.32	13252321.37	858.30	22" WALNUT
2062	304433.37	13252331.32	858.81	20" WALNUT
2063	304442.23	13252336.36	858.63	22-24" ELM
2064	304436.83	13252344.59	858.64	16-18" ELM
2065	304445.20	13252349.15	858.66	24-26" ELM
2075	304573.59	13252437.14	861.60	34" MAPLE
2096	304670.14	13252337.03	858.55	6" ORNAMENTAL
2098	304591.18	13252327.62	858.56	14" WALNUT
2099	304607.56	13252335.82	858.36	20" BOXELDER
2104	304624.54	13252383.28	859.00	6" ORNAMENTAL
2107	304598.20	13252386.66	859.29	12" CEDAR
3367	304386.00	13251999.08	853.00	16" WALNUT
3368	304371.92	13251991.91	851.29	40" DEAD

PiATT LAND SURVEYING·LLC
P.O. Box 374
20624 Waterloo Road
Chelsea, MI 48118
(734) 730 - 8570
piattlandsurveying.com

PROJECT:

TOPOGRAPHIC SURVEY

TAX ID # 08-08-06-285-005
TAX ID # 08-08-06-285-008
7965 - 7997 GRAND ST
DEXTER, MI 48130

Part of the NW 1/4 of Fractional Section 6, T2S, R5E, Scio Twp (City of Dexter), Washtenaw County, Michigan

CLIENT:

D.B. One, LLC
7965 Grand Street
Dexter, MI 48130

LEGEND

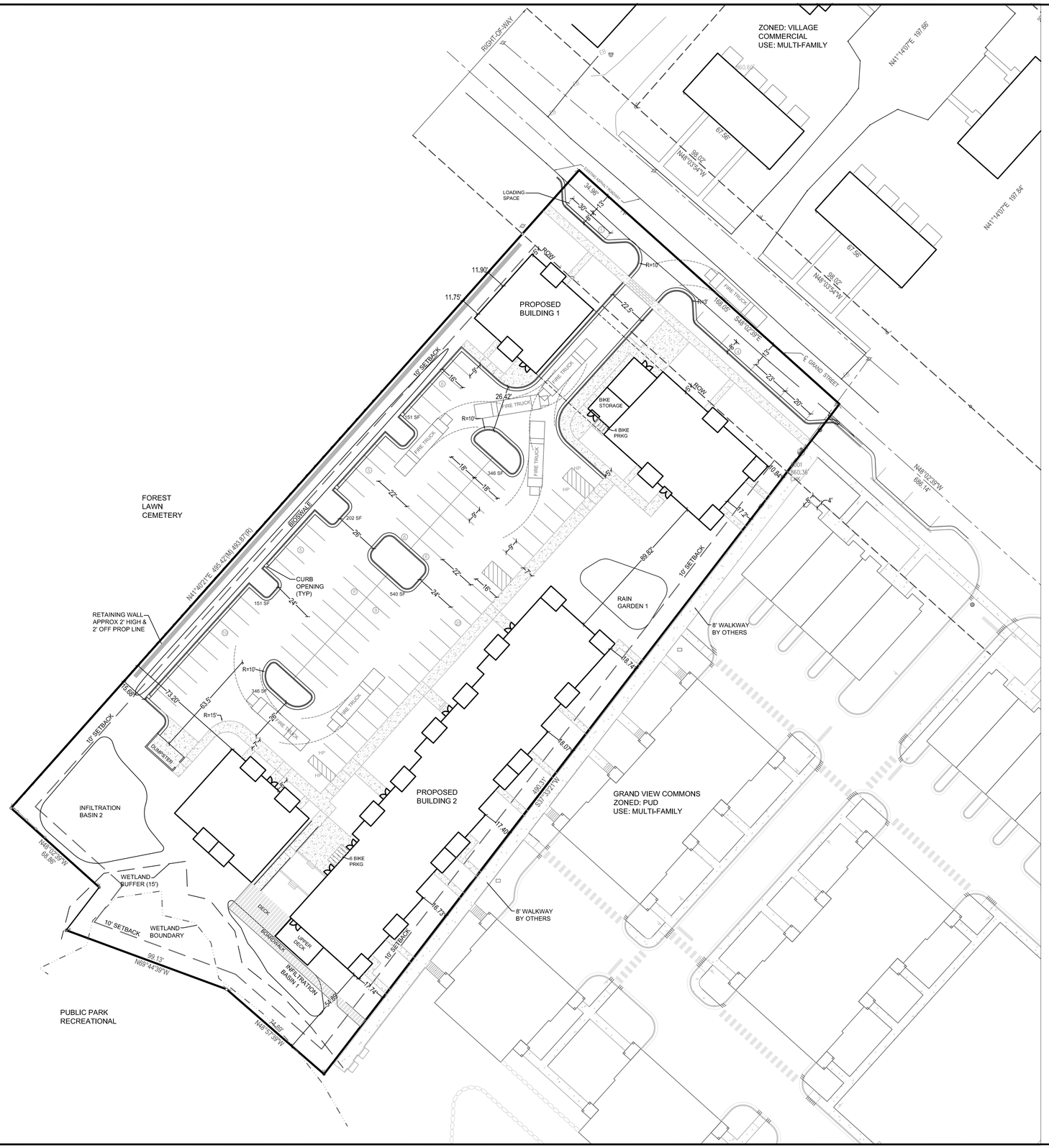
- SECTION CORNER
- F FOUND IRON PIPE
- S SET IRON PIPE
- EX. FENCE LINE
- (R) RECORD DIM.
- (M) MEASURE DIM.
- PROPERTY LINE
- TOP/ TOE OF SLOPE
- EDGE OF LAKE
- UNDERGROUND UTILITIES
- OVERHEAD ELECTRIC
- FENCELINE
- CONTOUR (MAJOR)
- CONTOUR (MINOR)
- UTILITY POLE
- EL. 885.76 / 12" OAK — TREE LOCATION AND IDENTIFICATION INFO.
- G GRINDER PUMP
- W POTABLE WATER WELL
- SOIL BORINGS
- WATER SHUTOFF

SCALE: 1" = 30'
0 15 30 60

DATE: 6/07/2022
REV:
REV:

JOB NO. 2022-0025A

SHEET: 1 OF 1



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- CONTOUR (MINOR)
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- EL. 885.76 12" OAK TREE LOCATION AND IDENTIFICATION INFO.
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- W POTABLE WATER WELL
- SOIL BORINGS
- WATER SHUTOFF
- PR STORM SEWER
- PR SANITARY SEWER
- PR WATER MAIN
- PR GAS
- PR CURB AND GUTTER
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- PR CONCRETE
- PR STAMPED CONCRETE
- PR TREE FENCE
- PR SILT FENCE
- PR INLET FILTER

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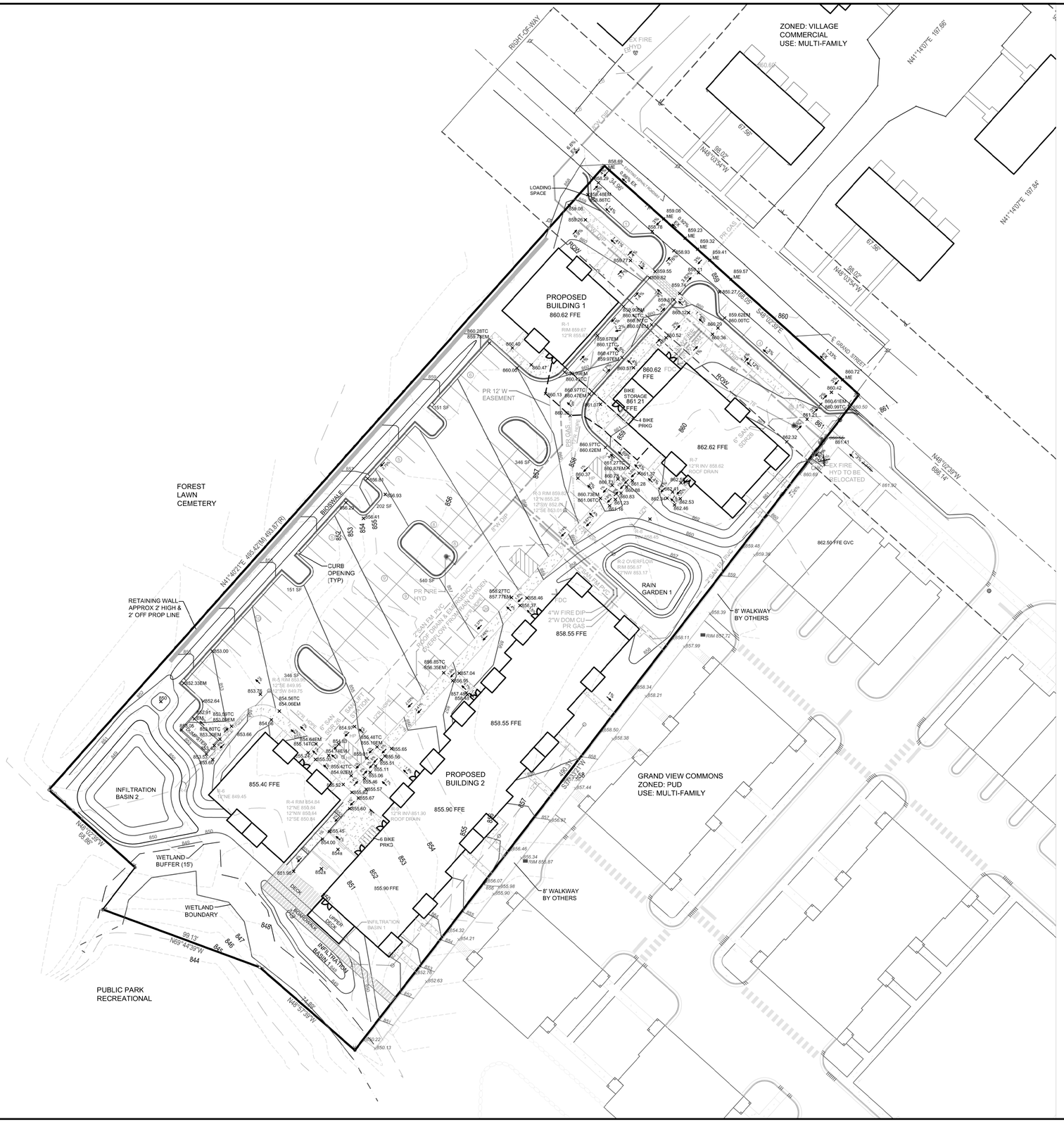
Maceng Engineering, LLC.
PO Box 314, Chelsea, MI 48118 734-216-9941

GRAND STREET
DEXTER, MI

PRELIMINARY SITE PLAN LAYOUT

KATHY KEINATH ENGINEER No. 47053 STATE OF MICHIGAN PROFESSIONAL ENGINEER

	7-11-23
	6-22-23
DATE	5-5-23
SCALE	1"=30'
SHEET NO.	PSP-03



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Macon Engineering, LLC.
PO Box 314, Chelsea, MI 48118 734-216-9941

GRAND STREET
DEXTER, MI
PRELIMINARY SITE PLAN
GRADING

KATHY KENATH ENGINEER No. 49035 STATE OF MICHIGAN REGISTERED PROFESSIONAL ENGINEER

	7-11-23
	6-22-23
DATE	5-5-23
SCALE	1"=30'
SHEET NO.	PSP-04

FROM MH	TO MH	ACRES A	IMPERV. FACTOR C	EQUIV. AREA A * C	ADD. AREA A * C	SUM OF A * C	INTENSITY I	TIME OF CONCEN-TRATION	RUNOFF (CFS) Q	PIPE CAPACITY (CFS)	LENGTH OF PIPE	PIPE DIAMETER IN	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	VELOCITY FLOWING FULL (FPS)	TIME (MIN)	HG ELEV UPPER END	HG ELEV LOWER END	RIM ELEV UPPER END	INVERT UPPER END	INVERT LOWER END	DEPTH COVER	HG DEPTH
R-1	R-3	0.03	0.773	0.02	0.00	0.02	3.89	20.00	0.08	2.66	106	12	0.000%	0.40%	2.87	0.62	856.47	856.05	859.67	855.67	855.25	3.00	3.20
R-2	R-3	0.00	0.000	0.00	0.00	0.00	3.89	20.00	0.00	2.66	39	12	0.000%	0.40%	2.87	0.23	853.97	853.81	856.67	853.17	853.01	2.50	2.70
R-3	R-4	0.00	0.00	0.00	0.02	0.02	3.84	20.62	0.08	4.21	197	12	0.000%	1.00%	4.54	0.72	853.61	852.70	859.82	852.81	850.84	6.01	6.21
R-9	R-4	0.22	0.95	0.21	0.00	0.21	3.89	20.00	0.82	6.77	41	12	0.052%	2.59%	7.30	0.09	852.70	851.64	855.90	851.90	850.84	3.00	3.20
R-4	R-5	0.00	0.00	0.00	0.23	0.23	3.83	20.72	0.88	4.55	59	12	0.061%	1.17%	4.91	0.20	851.44	850.75	854.84	850.64	849.95	3.20	3.40
R-5	R-6	0.00	0.00	0.00	0.23	0.23	3.81	20.92	0.88	2.66	74	12	0.060%	0.40%	2.87	0.43	850.55	850.25	853.95	849.75	849.45	3.20	3.40
R-7	R-8	0.21	0.950	0.20	0.00	0.20	3.89	20.00	0.78	2.66	43	12	0.047%	0.40%	2.87	0.25	859.42	859.25	862.62	858.62	858.45	3.00	3.20

LEGEND

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- PR CONCRETE
- PR STAMPED CONCRETE
- PR TREE FENCE
- PR SILT FENCE
- PR INLET FILTER
- EX TREE

NOTES:
1. SANITARY LIFT STATION TO BE PRIVATE AND MAINTAINED BY THE DEVELOPMENT.

811 Know what's **below.** **Call** before you dig.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

Macon Engineering, LLC.
PO Box 314, Chelsea, MI 48118 734-216-9941

GRAND STREET
DEXTER, MI

PRELIMINARY SITE PLAN
UTILITIES AND FIRE PROTECTION

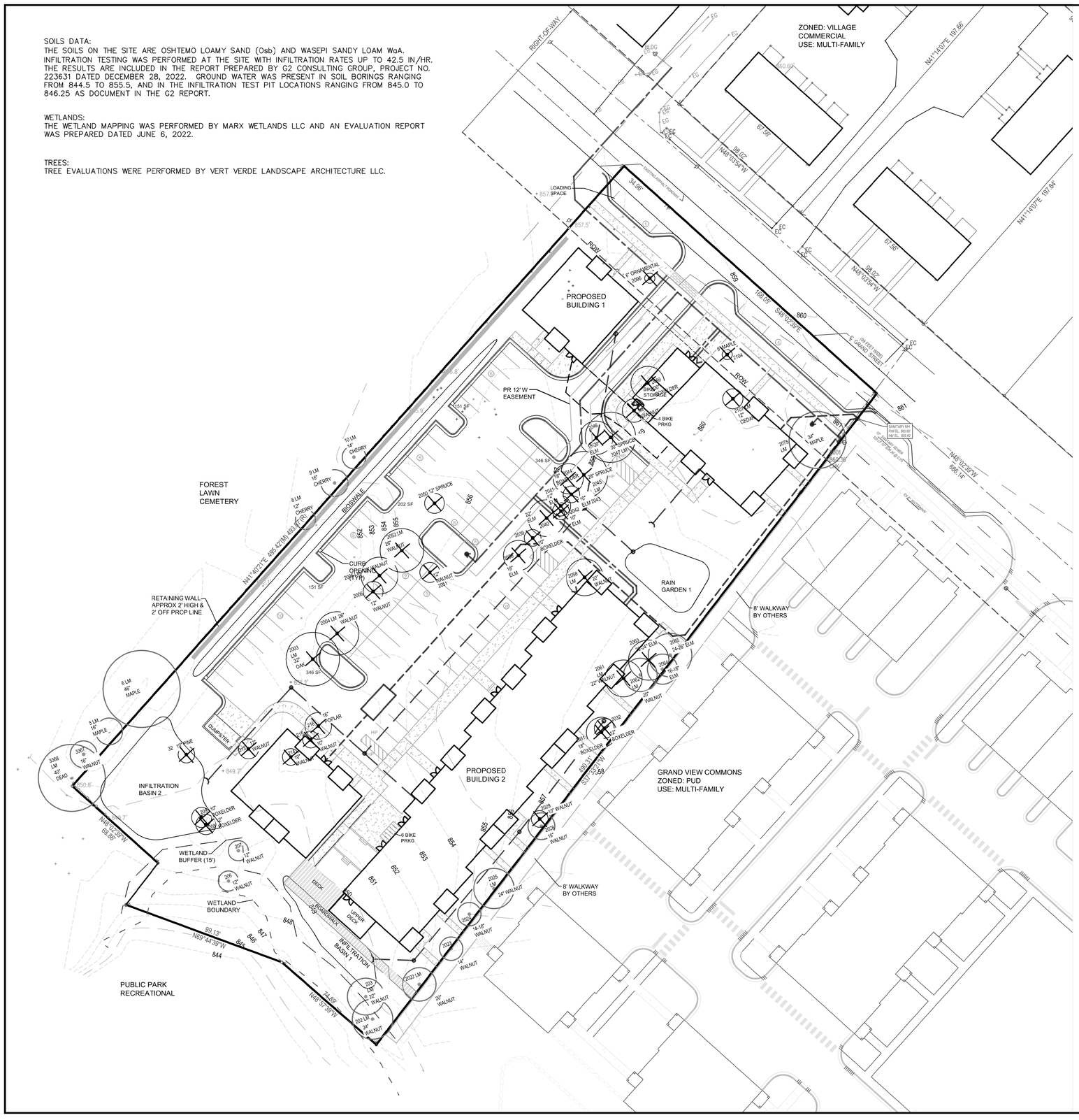
KATHY KOHATH ENGINEER No. 46063 STATE OF MICHIGAN REGISTERED PROFESSIONAL ENGINEER

7-11-23
6-22-23
DATE 5-5-23
SCALE 1"=30'
SHEET NO. PSP-05

SOILS DATA:
THE SOILS ON THE SITE ARE OSHTEMO LOAMY SAND (Osb) AND WASEPI SANDY LOAM WaA. INFILTRATION TESTING WAS PERFORMED AT THE SITE WITH INFILTRATION RATES UP TO 42.5 IN/HR. THE RESULTS ARE INCLUDED IN THE REPORT PREPARED BY G2 CONSULTING GROUP, PROJECT NO. 223631 DATED DECEMBER 28, 2022. GROUND WATER WAS PRESENT IN SOIL BORINGS RANGING FROM 844.5 TO 855.5, AND IN THE INFILTRATION TEST PIT LOCATIONS RANGING FROM 845.0 TO 846.25 AS DOCUMENT IN THE G2 REPORT.

WETLANDS:
THE WETLAND MAPPING WAS PERFORMED BY MARX WETLANDS LLC AND AN EVALUATION REPORT WAS PREPARED DATED JUNE 6, 2022.

TREES:
TREE EVALUATIONS WERE PERFORMED BY VERT VERDE LANDSCAPE ARCHITECTURE LLC.



NATURAL FEATURES:
THERE ARE WETLANDS AND SEVERAL TREES LOCATED ON THE PROPERTY. THE TREE TABLE PROVIDES THE TREE ID NUMBER, SPECIES, LOCATION CONDITION AND LANDMARK STATUS. THE TABLE ALSO SHOWS IF MITIGATION IS REQUIRED. THE MAJORITY OF THE TREE ON THE SITE THAT ARE PROPOSED FOR REMOVAL ARE TREES THAT THE CITY DOES NOT PERMIT TO BE PLANTED INCLUDING WALNUT, POPLAR, BOX ELDER AND ELM. THE LANDSCAPING SHEET INCLUDES A LANDSCAPE REQUIREMENTS CHART SHOWING THE MITIGATION THAT WOULD BE REQUIRED FOR THE TREE REMOVAL. THE PETITIONER IS REQUESTING A WAIVER TO REDUCE THE REQUIRED TREE MITIGATION BASED ON THE FOLLOWING:

1. THERE ARE EXISTING WETLANDS REDUCING THE AREA AVAILABLE FOR TREE MITIGATION LOCATIONS.
2. THE ADJACENT LAND TO THE WEST AND THE SOUTH IS NOT RESIDENTIAL AND CAN NOT BE DEVELOPED AS RESIDENTIAL IN THE FUTURE.
3. THE PROPERTY AND PARKING AREAS ARE SCREEN FROM PUBLIC VIEW BY PLACEMENT OF THE BUILDING ALONG THE PROPERTY FRONTAGE.
4. MITIGATION TREES HAVE BEEN PROVIDED ALONG THE EAST AND WEST PROPERTY LINES TO PROVIDE SCREENING.
5. MITIGATION TREES HAVE BEEN PROVIDED ALONG THE WETLAND BOUNDARY TO THE EXTENT POSSIBLE.
6. THE MAJORITY OF THE EXISTING TREES SPECIES TO BE REMOVED ARE NOT ALLOWED TO BE PLANTED BY CITY CODE.
7. ALL TREES TO REMAIN ARE TO BE PROTECTED WITH TREE FENCE AS SHOWN ON THE DETAIL SHEET.

LEGEND

- SECTION CORNER
- FOUND IRON PIPE
- SET IRON PIPE
- EX. FENCE LINE
- (R) RECORD DIM.
- (M) MEASURE DIM.
- PROPERTY LINE
- TOP/ TOE OF SLOPE
- EDGE OF LAKE
- UNDERGROUND UTILITIES
- OVERHEAD ELECTRIC
- FENCELINE
- CONTOUR (MAJOR)
- CONTOUR (MINOR)
- UTILITY POLE
- EL. 885.76 12" OAK — TREE LOCATION AND IDENTIFICATION INFO.
- GRINDER PUMP
- POTABLE WATER WELL
- SOIL BORINGS
- WATER SHUTOFF
- PR STORM SEWER
- PR SANITARY SEWER
- PR WATER MAIN
- PR GAS
- PR CURB AND GUTTER
- 800 PR CONTOUR
- PR CONCRETE
- PR STAMPED CONCRETE
- PR TREE FENCE
- PR SILT FENCE
- PR INLET FILTER
- TREE REMOVAL

TREE TABLE

TREE ID	DBH/ SPECIES	CONDITION	DESIGNATION		STATUS	LOCATION	MITIGATION
5	16" MAPLE	GOOD	LM		SAVE	CEMETERY PROPERTY LINE	
6	46" MAPLE	POOR	LM		SAVE	CEMETERY PROPERTY LINE	
8	12" CHERRY	FAIR	LM		SAVE	CEMETERY PROPERTY LINE	
9	16" CHERRY	FAIR	LM		SAVE	CEMETERY PROPERTY LINE	
10	14" CHERRY	FAIR	LM		SAVE	CEMETERY PROPERTY LINE	
32	10" PINE	POOR			REMOVE	INFILTRATION BASIN 2	NO MITIGATION REQUIRED
202	24" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	SAVE	WETLAND	
203	22" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	SAVE	WETLAND	
206	12" WALNUT	GOOD		NOT PERMITTED BY CODE	SAVE	WETLAND	
207	12" WALNUT	GOOD		NOT PERMITTED BY CODE	SAVE	WETLAND	
208	12" BOXELDER	FAIR		NOT PERMITTED BY CODE	REMOVE	INFILTRATION BASIN 2	REQUIRES MITIGATION
209	10" BOXELDER	POOR		NOT PERMITTED BY CODE	REMOVE	INFILTRATION BASIN 2	NO MITIGATION REQUIRED
213	12" WALNUT	GOOD		NOT PERMITTED BY CODE	REMOVE	INFILTRATION BASIN 2	REQUIRES MITIGATION
214	10" WALNUT	GOOD		NOT PERMITTED BY CODE	REMOVE	BUILDING 2 FOOTPRINT	REQUIRES MITIGATION
215	10" WALNUT	GOOD		NOT PERMITTED BY CODE	REMOVE	BUILDING 2 INFLUENCE	REQUIRES MITIGATION
216	16" POPLAR	GOOD	INVASIVE	NOT PERMITTED BY CODE	REMOVE	SIDEWALK	NO MITIGATION REQUIRED
2003	32" OAK	GOOD	LM		REMOVE	PARKING LOT	REQUIRES MITIGATION
2004	26" WALNUT	FAIR	LM	NOT PERMITTED BY CODE	REMOVE	PARKING LOT	REQUIRES MITIGATION
2005	22" WALNUT	FAIR	LM	NOT PERMITTED BY CODE	REMOVE	PARKING LOT	REQUIRES MITIGATION
2006	12" WALNUT	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2022	20" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2023	14" WALNUT	NOT FOUND		NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2024	14-18" WALNUT	NOT FOUND		NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2025	24" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2028	16" WALNUT	FAIR		NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2029	10" WALNUT	POOR		NOT PERMITTED BY CODE	REMOVE	GVC PROPERTY LINE	NO MITIGATION REQUIRED
2031	18" BOXELDER	POOR		NOT PERMITTED BY CODE	REMOVE	EAST SIDE STORM SEWER	NO MITIGATION REQUIRED
2032	12" BOXELDER	POOR		NOT PERMITTED BY CODE	REMOVE	EAST SIDE STORM SEWER	NO MITIGATION REQUIRED
2038	18" ELM	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2039	10" BOXELDER	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2040	22" ELM	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2041	12" ELM	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2042	10" ELM	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2043	10" ELM	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2044	18" BOXELDER	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2045	28" SPRUCE	GOOD	LM		REMOVE	PARKING LOT	REQUIRES MITIGATION
2046	18-20" ELM	POOR		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	NO MITIGATION REQUIRED
2047	30" SPRUCE	GOOD	LM		REMOVE	PARKING LOT	REQUIRES MITIGATION
2050	12" SPRUCE	GOOD			REMOVE	PARKING LOT	REQUIRES MITIGATION
2051	12" WALNUT	GOOD		NOT PERMITTED BY CODE	REMOVE	PARKING LOT	REQUIRES MITIGATION
2052	26" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	REMOVE	PARKING LOT	REQUIRES MITIGATION
2058	22" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	REMOVE	BUILDING 2 INFLUENCE	REQUIRES MITIGATION
2061	22" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	REMOVE	BUILDING 2 INFLUENCE	REQUIRES MITIGATION
2062	20" WALNUT	GOOD	LM	NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2063	22-24" ELM	GOOD		NOT PERMITTED BY CODE	REMOVE	BUILDING 2 INFLUENCE	REQUIRES MITIGATION
2064	16-18" ELM	GOOD		NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2065	24-26" ELM	GOOD		NOT PERMITTED BY CODE	SAVE	GVC PROPERTY LINE	
2075	34" MAPLE	GOOD	LM		SAVE	RIGHT-OF-WAY	
2096	6" ORNAMENTAL	GOOD			REMOVE	RIGHT-OF-WAY WATERMAIN INFLUENCE	NO MITIGATION REQUIRED
2098	14" WALNUT	FAIR		NOT PERMITTED BY CODE	REMOVE	BUILDING 1	REQUIRES MITIGATION
2099	20" BOXELDER	FAIR		NOT PERMITTED BY CODE	REMOVE	BUILDING 1	REQUIRES MITIGATION
2104	6" MAPLE	DEAD			REMOVE	RIGHT-OF-WAY WATERMAIN INFLUENCE	NO MITIGATION REQUIRED
2107	12" CEDAR	GOOD	LM		REMOVE	BUILDING 1	REQUIRES MITIGATION
3367	16" WALNUT	GOOD		NOT PERMITTED BY CODE	SAVE	CEMETERY PROPERTY LINE	
3368	40" DEAD	DEAD	LM		SAVE	CEMETERY PROPERTY LINE	

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Macon Engineering, LLC.
PO Box 314, Chelsea, MI 48118 734-216-9941

GRAND STREET
DEXTER, MI

PRELIMINARY SITE PLAN
NATURAL FEATURES OVERLAY

STATE OF MICHIGAN
KATHY KENAITH
ENGINEER
No. 49036
PROFESSIONAL ENGINEER

	7-11-23
	6-22-23
DATE	5-5-23
SCALE	1"=30'
SHEET NO.	PSP-06

MAINTENANCE NOTES

ALL LANDSCAPE MATERIALS, INSTALLATION, AND MAINTENANCE SHALL COMPLY W/ ZONING ORDINANCE .

ALL PLANT MATERIAL SHALL BE LOCALLY GROWN OR OF THIS NORTH MIDWEST AMERICAN REGION AND CONFORM TO THE CURRENT AAN STANDARDS. USE NO.1 GRADE PLANT MATERIAL.

PLANTING PERIOD SHALL BE: MARCH 15 - NOV. 15 ANTICIPATED: 2020

ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION FREE OF WEEDS AND DEBRIS WITH ONE CULTIVATION FOR WEED CONTROL PER MONTH DURING JUNE, JULY AND AUGUST. THIS ESTABLISHMENT PERIOD SHALL BE ONE (1) YEAR FROM THE DATE OF APPROVAL OF PLANTINGS BY THE CITY. REPLACEMENT OF ANY FAILING PLANT MATERIAL, INCLUDING TREES, SHALL BE GUARANTEED DURING THE ONE (1) YEAR ESTABLISHMENT PERIOD. FAILING PLANT MATERIAL SHALL BE REPLACED WITHIN THIRTY (30) DAYS, WEATHER PERMITTING.

ALL LANDSCAPE AREAS SHALL BE PROVIDED WITH A READILY AVAILABLE AND ACCEPTABLE WATER SUPPLY OR WITH AT LEAST ONE (1) OUTLET LOCATED WITHIN ONE HUNDRED (100) FEET OF ALL PLANT MATERIAL TO BE MAINTAINED.

ALL TREE WRAP, STAKES AND GUY WIRES SHALL BE REMOVED AFTER ONE WINTER SEASON.

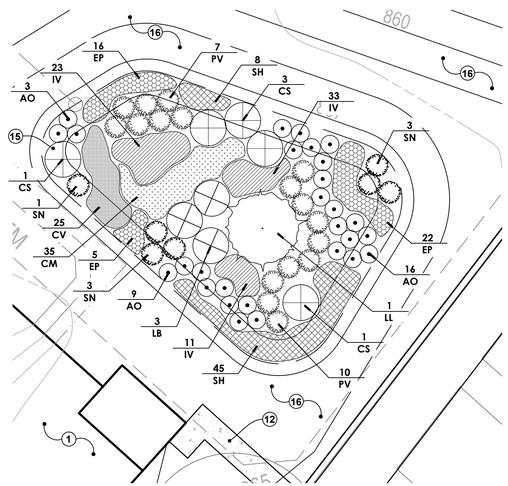
NO PLANTINGS GREATER THAN 6" HIGH SHALL BE PLANTED WITHIN FIFTEEN (15) FEET OF FIRE HYDRANTS. PLANT MATERIAL SHALL NOT BLOCK VISIBILITY OF HYDRANT.

PLANT SCHEDULE

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	ROOT	COMMENTS
TREES							
10	AG	*Amalanchier x g. 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	7'-8' ht.	as shown	B&B	Minimum 5 stems
3	AR	*Acer r. 'October Glory'*	October Glory Red Maple	3" cal.	as shown	B&B	Single straight trunk
5	AS	*Acer s. 'Green Mountain'*	Green Mountain Sugar Maple	2.5" cal.	as shown	B&B	Single straight trunk
8	CB	*Carpinus betulus 'Fastigiata'*	Columnar Hornbeam	2.5" cal.	as shown	B&B	Single straight trunk
6	CC	*Cercis canadensis 'Ruby Falls'*	Ruby Falls Redbud	48" ht.	as shown	B&B	Single straight trunk
4	CK	*Cornus kousa 'Milkyway'*	Milkyway Kousa Dogwood	2.5" cal.	as shown	B&B	Single straight trunk
5	CO	*Celtis occidentalis*	Northern Hackberry	3" cal.	as shown	B&B	Single straight trunk
5	GT	*Gleditsia t. 'Skyline'*	Skyline Honeylocust	3" cal.	as shown	B&B	Single straight trunk
1	LL	*Larix laricina*	Eastern Larch	7' ht.	as shown	B&B	Single straight trunk
5	LT	*Liriodendron tulipfera*	Tulip Tree	3" cal.	as shown	B&B	Single straight trunk
9	PA	*Platanus x. acerifolia 'Bloodgood'*	Bloodgood London Plane Tree	2.5" cal.	as shown	B&B	Single straight trunk
7	QM	*Quercus macrocarpa*	Burr Oak	3" cal.	as shown	B&B	Single straight trunk
15	QN	*Quercus robur x bicolor 'Nadler'*	Kindred Spirit Oak	2.5" cal.	as shown	B&B	Single straight trunk
8	QR	*Quercus rubra*	Red Oak	2.5" cal.	as shown	B&B	Single straight trunk
5	TA	*Tilia americana 'Redmond'*	Redmond American Basswood	2.5" cal.	as shown	B&B	Single straight trunk
SHRUBS							
56	AM	*Aronia melanocarpa 'Low Scape Hedger'*	Low Scape Hedger Black Chokeberry	24" ht.	as shown	cont.	Well rooted
5	CS	*Cornus sericea*	Red Osier Dogwood	30" ht.	as shown	cont.	Well rooted
5	HP	*Hydrangea p. 'Little Quick Fire'*	Little Quick Fire Hydrangea	30" ht.	as shown	cont.	Well rooted
4	HQ	*Hydrangea q. 'Ruby Slippers'*	Ruby Slippers Oakleaf hydrangea	36" ht.	as shown	cont.	Well rooted
10	LB	*Lindera benzoin*	Spicebush	30" ht.	as shown	cont.	Well rooted
17	PO	*Physocarpus o. 'Summer Wine'*	Summer Wine Ninebark	36" ht.	as shown	cont.	Well rooted
3	RC	*Rhododendron c. 'Boursault'*	Boursault Rhododendron	30" ht.	as shown	cont.	Well rooted
54	TD	*Taxus x m. 'Densiformis'*	Dense Yew	24" spd	as shown	B&B	Trim to Hedge
6	VL	*Viburnum lentago*	Nannyberry Viburnum	36" ht.	as shown	B&B	
9	VP	*Viburnum p.t. 'Shasta'*	Shasta Doubletire Viburnum	36" ht.	as shown	B&B	
PERENNIALS							
28	AO	*Aster o. 'October Skies'*	October Skies Aster	1 gal.	as shown	cont.	Well rooted
35	CM	*Carex muskingumensis*	Palm Sedge	1 gal.	18" o.c.	cont.	Well rooted
25	CV	*Carex vulpinoidea*	Fox Sedge	1 gal.	18" o.c.	cont.	Well rooted
43	EP	*Echinacea p. 'Magnus'*	Magnus Purple Coneflower	1 gal.	18" o.c.	cont.	Well rooted
46	HH	*Hosta 'Halcyon'*	Halcyon Hosta	1 gal.	as shown	cont.	Well rooted
18	HPP	*Heuchera 'Palace Purple'*	Palace Purple Coralbells	1 gal.	as shown	cont.	Well rooted
67	IV	*Iris virginica*	Blue Flag Iris	1 gal.	18" o.c.	cont.	Well rooted
17	PV	*Panicum v. 'Shenandoah'*	Shenandoah Switchgrass	2 gal.	as shown	cont.	Well rooted
126	PVH	*Panicum v. 'Heavy Metal'*	Heavy Metal Switchgrass	2 gal.	as shown	cont.	Well rooted
53	SH	*Sporobolus heterolepis*	Prairie Dropseed	1 gal.	18" o.c.	cont.	Well rooted
10	SN	*Sogghastrum nutans*	Indian Grass	2 gal.	as shown	cont.	Well rooted

LANDSCAPE REQUIREMENTS

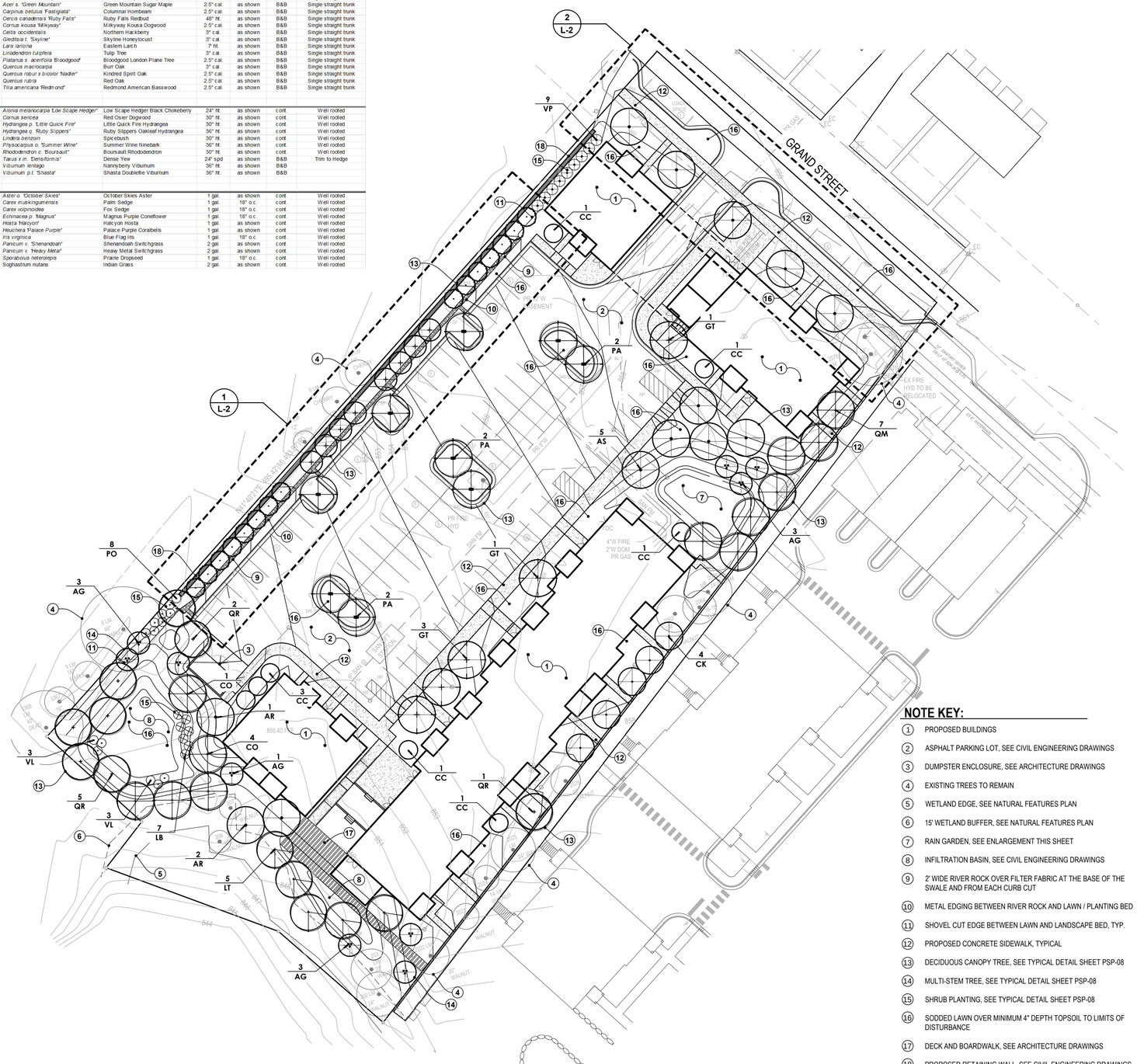
SECTION 6:11 LANDSCAPE SCREENING BUFFER BETWEEN LAND USES			**Required**			**Provided**	
Multi-Family to Multi-family East Side			n/a			n/a	
Multi-Family to Cemetery West Side			n/a			See L-2	
Multi-Family to Public South Rear			n/a			n/a	
SECTION 6:10 ON-SITE LANDSCAPING			**Required**			**Provided**	
Village Commercial			n/a			n/a	
SECTION 6:09 PARKING LOT LANDSCAPING			**Required**			**Provided**	
Islands							
three percent (3%) of the total parking lot	26,709 sf		801	sf		1582	sf
Landscaping							
25 through 100 spaces: 1 canopy/deciduous tree and 100 s.f. of landscaped area per 10 spaces, rounded upward.	85 spaces						
trees			9	ea		9	ea
landscaped area			850	sf		1582	sf
SECTION 6:08 PARKING LOT SCREENING			**Required**			**Provided**	
Screening from public street			n/a			n/a	
SECTION 6:07 STREET TREES			**Required**			**Provided**	
Street Trees Form Based							
One (1) street tree/canopy tree is required at a minimum of every thirty (30) lineal feet or a maximum of every forty (40) lineal feet	206.5 ft		5.1 to 6.9	ea	1 ex	5 pr	ea
SECTION 6:06 REPLACEMENT STANDARDS			**Required**			**Provided**	
12" to 23.9" Trees (3 trees for each at 2.5" cal)		7 ea	21	ea		21	ea
8" to 11.9" Trees (2 trees for each at 2.5" cal)		2 ea	4	ea		4	ea
Ladmark Trees (1:1 DBH at 3" cal)		220 in	73	ea		58	ea
Total			98	ea		83	ea
						84%	



RAIN GARDEN 1 ENLARGEMENT

SCALE: 1" = 10'-0"

0 5 10 20



OVERALL PLAN

SCALE: 1" = 30'-0"

0 15 30 60

NORTH

NOTE KEY:

1. PROPOSED BUILDINGS
2. ASPHALT PARKING LOT, SEE CIVIL ENGINEERING DRAWINGS
3. DUMPSTER ENCLOSURE, SEE ARCHITECTURE DRAWINGS
4. EXISTING TREES TO REMAIN
5. WETLAND EDGE, SEE NATURAL FEATURES PLAN
6. 15' WETLAND BUFFER, SEE NATURAL FEATURES PLAN
7. RAIN GARDEN, SEE ENLARGEMENT THIS SHEET
8. INFILTRATION BASIN, SEE CIVIL ENGINEERING DRAWINGS
9. 2' WIDE RIVER ROCK OVER FILTER FABRIC AT THE BASE OF THE SWALE AND FROM EACH CURB CUT
10. METAL EDGING BETWEEN RIVER ROCK AND LAWN / PLANTING BED
11. SHOVEL CUT EDGE BETWEEN LAWN AND LANDSCAPE BED, TYP.
12. PROPOSED CONCRETE SIDEWALK, TYPICAL
13. DECIDUOUS CANOPY TREE, SEE TYPICAL DETAIL SHEET PSP-08
14. MULTI-STEM TREE, SEE TYPICAL DETAIL SHEET PSP-08
15. SHRUB PLANTING, SEE TYPICAL DETAIL SHEET PSP-08
16. SODDED LAWN OVER MINIMUM 4" DEPTH TOPSOIL TO LIMITS OF DISTURBANCE
17. DECK AND BOARDWALK, SEE ARCHITECTURE DRAWINGS
18. PROPOSED RETAINING WALL, SEE CIVIL ENGINEERING DRAWINGS

VLA vert verde landscape architecture
734.249.3568 Plymouth, MI
james@vertverde.com

Issued For:

07.12.2023 Site Plan Review

Project:

MILL CREEK FLATS

7965 & 7997 Grand Street
Dexter, Michigan

Project Sponsor:

Grand Street Development Group
8255 Cascade Street
Commerce Twp., MI 48382

MAVD
2723 S. State Street, Suite250
Ann Arbor, MI 48104

Sheet Name:

Landscape Plan

NOT FOR CONSTRUCTION

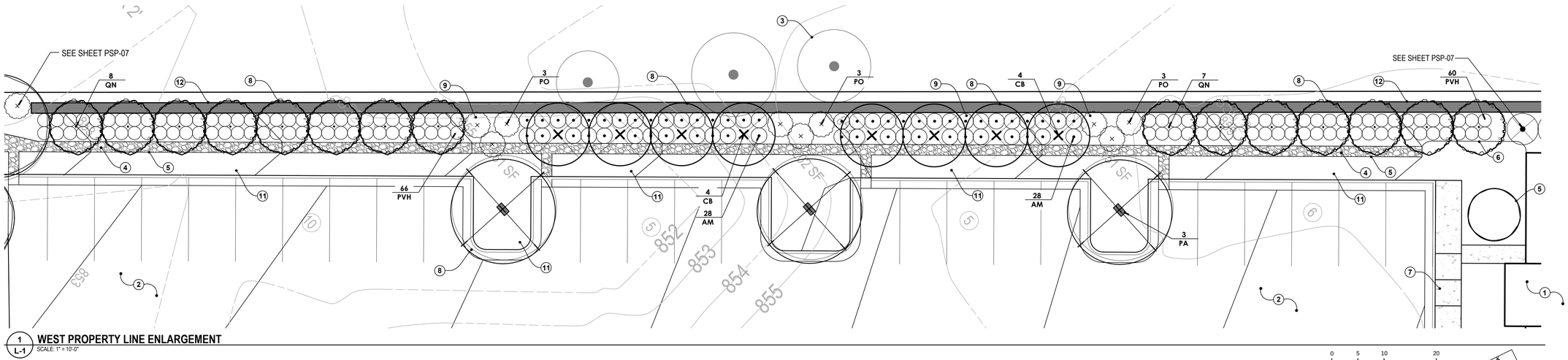
Seal:

STATE OF MICHIGAN · JAMES GRAY · LANDSCAPE ARCHITECT · No. 1528 · REGISTERED LANDSCAPE ARCHITECT

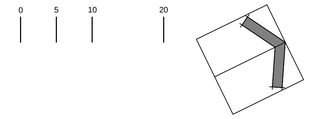
Drawn:	JG
Checked:	JG
Date:	06.2023
Scale:	AS NOTED

Project Number: 23.032

Sheet Number: PSP–07

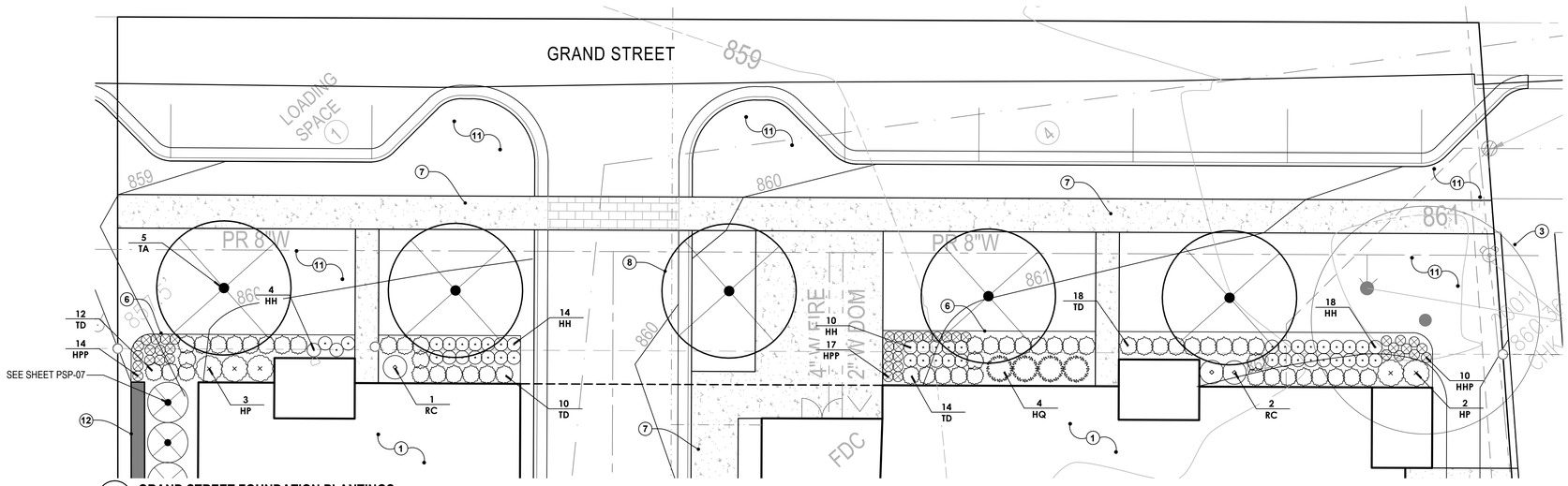


1 L-1 **WEST PROPERTY LINE ENLARGEMENT**
SCALE: 1" = 10'-0"

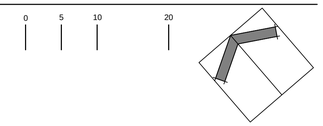


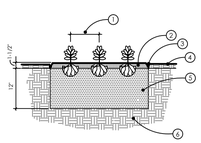
NOTE KEY:

1. PROPOSED BUILDINGS
2. ASPHALT PARKING LOT, SEE CIVIL ENGINEERING DRAWINGS
3. EXISTING TREES TO REMAIN
4. 2' WIDE RIVER ROCK OVER FILTER FABRIC AT THE BASE OF THE SWALE AND FROM EACH CURB CUT
5. METAL EDGING BETWEEN RIVER ROCK AND LAWN / PLANTING BED
6. SHOVEL CUT EDGE BETWEEN LAWN AND LANDSCAPE BED, TYP.
7. PROPOSED CONCRETE SIDEWALK, TYPICAL
8. DECIDUOUS CANOPY TREE, SEE TYPICAL DETAIL
9. SHRUB PLANTING, SEE TYPICAL DETAIL
10. ORNAMENTAL TREE, SEE SHEET PSP-07
11. SODDED LAWN OVER MINIMUM 4" DEPTH TOPSOIL TO LIMITS OF DISTURBANCE
12. PROPOSED RETAINING WALL, SEE CIVIL ENGINEERING DRAWINGS



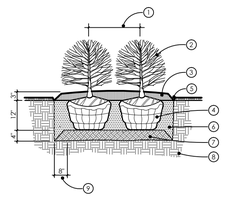
2 L-1 **GRAND STREET FOUNDATION PLANTINGS**
SCALE: 1" = 10'-0"





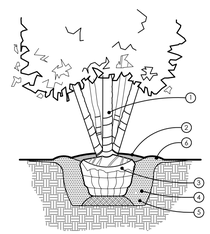
NOTES:
1. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION
1. SEE PLANT SCHEDULE FOR SPACING
2. 2" DEPTH CANADIAN PEAT TOP DRESSING OR 2" DEPTH DOUBLE SHREDDED HARDWOOD MULCH
3. SHOVEL CUT OR METAL EDGE, SEE PLAN
4. FINISH GRADE
5. EXCAVATE EXISTING SOIL TO 12" DEPTH, REPLACE WITH PLANT MIX
6. UNDISTURBED SUBGRADE

4 L-1 PERENNIAL / GROUNDCOVER PLANTING
NOT TO SCALE



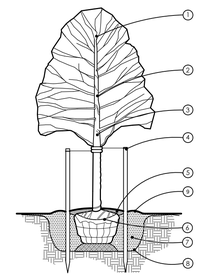
NOTES:
1. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION
2. SET TOP OF ROOTBALL 2" ABOVE FINISH GRADE
1. SEE PLAN FOR SPACING
2. SHRUBS, SEE PLANT SCHEDULE
3. 3" DEPTH DOUBLE SHREDDED HARDWOOD MULCH, TYPICAL
4. REMOVE ALL NON-BIODEGRADALBE TWINE FROM ENTIRE ROOTBALL. REMOVE BURLAP FROM TOP 1/2 OF ROOTBALL.
5. SHOVEL CUT OR METAL EDGE, SEE PLAN
6. EXCAVATE EXISTING SOIL TO 12" DEPTH, REPLACE WITH PLANT MIX
7. SCARIFY TO 4" DEPTH AND RECOMPACT
8. UNDISTURBED SUBGRADE
9. MINIMUM 8" BETWEEN ROOTBALL AND EDGE OF PLANTING PIT

3 L-1 SHRUB PLANTING
NOT TO SCALE



NOTES:
1. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION
2. SET TOP OF ROOTBALL 3" ABOVE FINISH GRADE
1. REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER MATERIALS WHICH ARE UNSIGHTLY OR COULD CAUSE GIRDLING.
2. COVER PLANTING W/ 3" DOUBLE SHREDDED HARDWOOD BARK MULCH. MINIMUM 6' DIA., LEAVE 3" CIRCLE OF BARE SOIL AROUND BASE OF THE STEMS.
3. REMOVE ALL NON-BIODEGRADABLE MATERIALS FROM THE ROOTBALL. FOLD DOWN ALL BURLAP AND REMOVE WIRE BASKET FROM THE TOP 1/3 OF THE ROOTBALL.
4. PLANT MIX
5. TREE PIT TO BE THREE TIMES WIDTH OF ROOTBALL
6. 4" TOPSOIL SAUCER

2 L-1 MULTISTEM TREE PLANTING
NOT TO SCALE



1. REMOVE SECONDARY LEADERS. DO NOT PRUNE TERMINAL LEADER OR BRANCH TIPS. PRUNE ALL DEAD AND BROKEN BRANCHES.
2. REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER MATERIALS WHICH ARE UNSIGHTLY OR COULD CAUSE GIRDLING.
3. STAKE TREES JUST BELOW FIRST BRANCH W/ 2-3" WIDE BELT-LIKE, FABRIC STRAPS ONLY. ARBOR TIE OR APPROVED EQUAL. (CONNECT FROM TREE TO STAKE OPPOSITE FROM EACH OTHER, AND ALLOW FOR SOME 'FLEXING') DO NOT USE WIRE OR ROPE THROUGH A HOSE. REMOVE AFTER ONE YEAR.
4. (2) 2"X2" HARDWOOD STAKES OR EQUIVALENT DRIVEN 6"-8" OUTSIDE OF ROOTBALL. REMOVE AFTER ONE YEAR.
5. COVER PLANTING W/ 3" DOUBLE SHREDDED HARDWOOD BARK MULCH. MINIMUM 6' DIA., LEAVE 3" CIRCLE OF BARE SOIL AROUND THE BASE OF THE TRUNK.
6. REMOVE ALL NON-BIODEGRADABLE MATERIALS FROM THE ROOTBALL. FOLD DOWN ALL BURLAP AND REMOVE WIRE BASKET FROM THE TOP 1/3 OF THE ROOTBALL.
7. PLANT MIX
8. TREE PIT TO BE 3 TIMES WIDTH OF ROOTBALL
9. 4" TOPSOIL SAUCER

NOTES:
1. STAKE TREES 3" - 5" CALIPER ONLY
2. GUY TREES 6" CALIPER AND OVER
3. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION
4. SET STAKES VERTICAL AND EVENLY SPACED
5. STAYS OR GUYS TO BE SET ABOVE FIRST BRANCH
6. TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.

1 L-1 DECIDUOUS TREE PLANTING
NOT TO SCALE

VVLA vert verde landscape architecture
734.249.3568 Plymouth, MI
james@vertverde.com

Issued For:
07.12.2023 Site Plan Review

Project:
MILL CREEK FLATS
7965 & 7997 Grand Street
Dexter, Michigan

Project Sponsor:
Grand Street Development Group
8255 Cascade Street
Commerce Twp., MI 48382

MAVD
2723 S. State Street, Suite250
Ann Arbor, MI 48104

Sheet Name:
Enlargements & Details

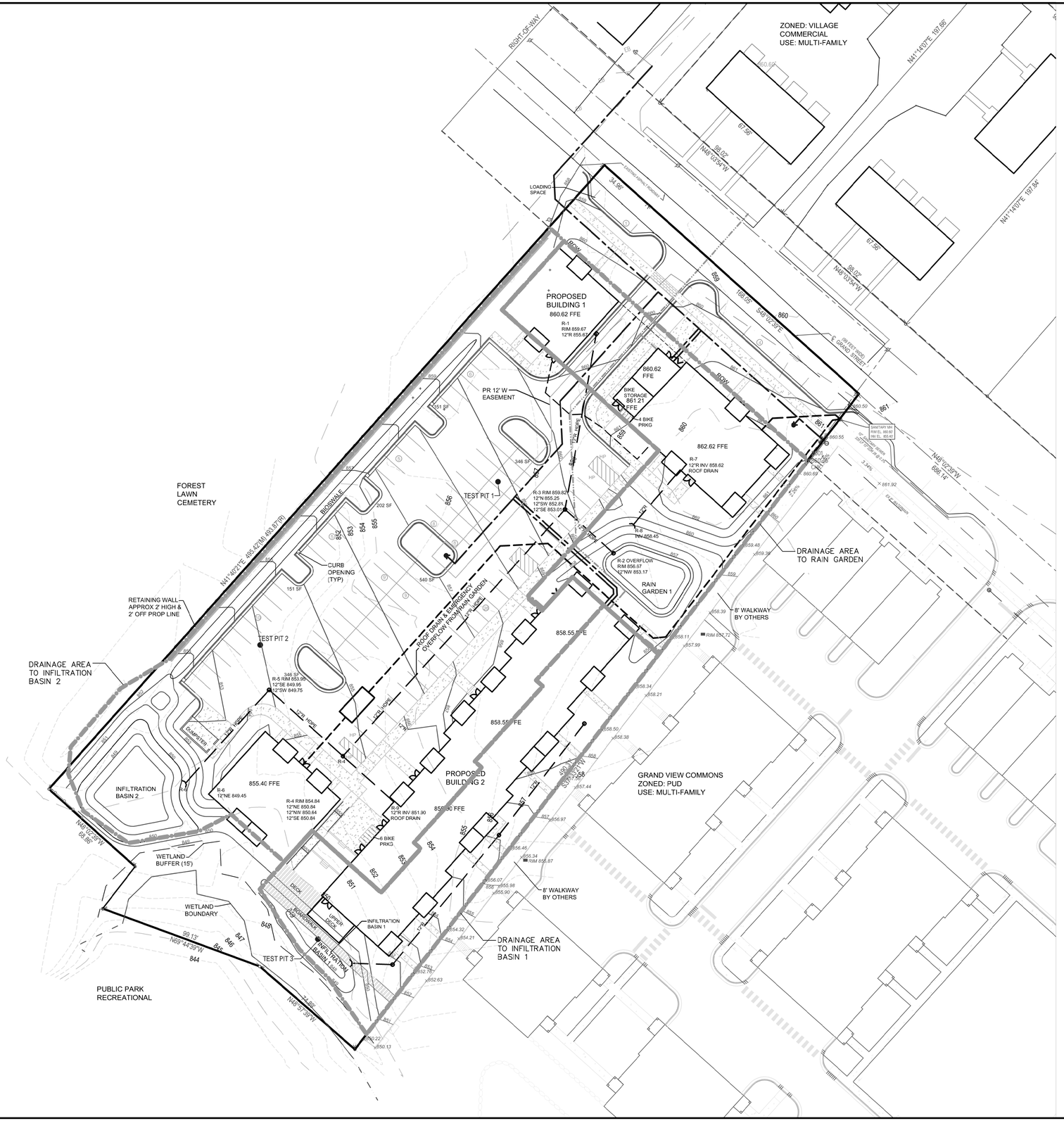
NOT FOR CONSTRUCTION

Seal:

Drawn: JG
Checked: JG
Date: 06.2023
Scale: AS NOTED

Project Number:
23.032

Sheet Number:
PSP–08



LEGEND

- SECTION CORNER
- FOUND IRON PIPE
- SET IRON PIPE
- EX. FENCE LINE
- (R) RECORD DIM.
- (M) MEASURE DIM.
- PROPERTY LINE
- TOP/ TOE OF SLOPE
- EDGE OF LAKE
- UNDERGROUND UTILITIES
- OVERHEAD ELECTRIC
- FENCELINE
- CONTOUR (MAJOR)
- CONTOUR (MINOR)
- UTILITY POLE
- EL. 885.76 12" OAK TREE LOCATION AND IDENTIFICATION INFO.
- G GRINDER PUMP
- W POTABLE WATER WELL
- SOIL BORINGS
- WATER SHUTOFF
- PR STORM SEWER
- PR SANITARY SEWER
- PR WATER MAIN
- PR GAS
- PR CURB AND GUTTER
- 800 PR CONTOUR
- PR CONCRETE
- PR STAMPED CONCRETE
- PR TREE FENCE
- PR SILT FENCE
- PR INLET FILTER

STORM WATER MANAGEMENT:
THE STORM WATER MANAGEMENT SYSTEM OPTIMIZES THE INFILTRATION CAPACITY OF THE SOILS ON THE SITE AND HAS BEEN SIZED TO PROVIDE TREATMENT OF THE 100 YEAR STORM EVENT BASED ON THE DESIGN STANDARDS OF THE WASHTENAW COUNTY WATER RESOURCES COMMISSION. THE SYSTEM IS SEPARATED INTO THREE AREAS.

THE FIRST AREA INCLUDES BUILDING 1 AND THE AREA SURROUNDING THAT FLOWS TO THE RAIN GARDEN. THE RAIN GARDEN IS SIZED TO INFILTRATE ALL OF THE RUNOFF COLLECTED FROM THE DRAINAGE AREA. THERE IS AN OVERFLOW STRUCTURE LOCATED IN THE RAIN GARDEN AT THE HIGH WATER ELEVATION THAT WOULD OVERFLOW TO THE PIPE THAT RUNS TO INFILTRATION BASIN 2. THE OVERFLOW WOULD ONLY ACT AS AN EMERGENCY OVERFLOW AS ALL OF THE WATER STORED IN THE RAIN GARDEN IS DESIGNED TO INFILTRATE.

THE SECOND DRAINAGE AREA INCLUDES THE EASTERN PORTION OF THE ROOF FROM BUILDING 2 AND THE SURROUNDING AREA. INFILTRATION BASIN 1 HAS BEEN DESIGNED TO INFILTRATE ALL OF THE RUNOFF FROM THIS AREA.

THE THIRD AREA INCLUDES THE PARKING LOT, THE WESTERN PORTION OF THE ROOF FOR BUILDING 2 AND THE SURROUNDING AREA. THE FOREBAY HAS BEEN SIZED TO PROVIDE PRETREATMENT OF THE RUNOFF FROM THE PARKING LOT. CURB CUTS HAVE BEEN PROVIDED ALONG THE WESTERN SIDE OF THE PARKING LOT THAT ALLOW RUNOFF TO FLOW TO THE PROPOSED BIOSWALE ALONG THE WESTERN EDGE THAT ALSO PROVIDES STORM WATER QUALITY TREATMENT BEFORE THE RUNOFF ULTIMATELY FLOWS TO THE INFILTRATION BASIN. THE ROOF WATER WILL BE PIPED DIRECTLY TO THE INFILTRATION BASIN. THE BASIN HAS BEEN SIZED TO COMPLETELY CONTAIN THE RUNOFF AND ALLOW FOR INFILTRATION OF THE STORM WATER.

Know what's **below.** **Call** before you dig.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

Macon Engineering, LLC.
PO Box 314, Chelsea, MI 48118 734-216-9941

GRAND STREET
DEXTER, MI

PRELIMINARY SITE PLAN
STORM WATER MANAGEMENT

STATE OF MICHIGAN
KATHY KENATH
ENGINEER
No. 47055
REGISTERED PROFESSIONAL ENGINEER

	7-11-23
	6-22-23
DATE	5-5-23
SCALE	1"=30'
SHEET NO.	PSP-09

PROPOSED AREA TO INFILTRATIN BASIN INFILTRATION BASIN 2

Total Site Area =	1.34 ac	58386	
Total Site Area Excluding "Self-Crediting" BMPs =			1.34 ac

W1: POST EDVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS AND RUNOFF COEFFICIENTS

Rational Method Variables

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	(C)(Area)
Building Roof	B	9,558	0.219	0.95	0.21
Concrete & Wall	B	4,686	0.108	0.95	0.10
Pavement	B	28,259	0.649	0.95	0.62
Road	B	0	0.000	0.95	0.00
Pervious	B	15,883	0.365	0.35	0.13
Rain Garden	B	0	0.000	0.95	0.00
		58,386	Total = Sum (C)(A)		1.05
			Area Total = Sum A (ac)		1.34
		Weighted C = Sum (C)(A)/Area Total			0.79

NRCS Variables Pervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Lawn	B	15,883	0.365	74	27
Rain Garden	B	0	0.000	98	0
Pervious Pavement	B	0	0.000	89	0
			Total = Sum (CN)(A)		26.98
			Area Total = Sum A (ac)		0.36
		Weighted CN = Sum (CN)(A)/Area Total			74

NRCS Variables Impervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Building Roof	B	9,558	0.219	98	22
Concrete	B	4,686	0.108	98	11
Pavement	B	28,259	0.649	98	64
Rain Garden	B	0	0.000	98	0
			Total = Sum (CN)(A)		95.62
			Area Total = Sum A (ac)		0.98
		Weighted CN = Sum (CN)(A)/Area Total			98

W2: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

First Flush Runoff Calculations (Vff)

Vff=(1")(1'/12")(43560sf/1ac)AC =	Vff =	3,828 cf

W3: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pre\development Bankfull Runoff Calculations (Vbf-pre)

2 yr/24 hr storm event	P=	2.35 in
Pre-devlopment Land Cover	CN =	71
S=(1000/CN)-10	S =	4.08 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	0.42 in
Total site area (sf) excluding self crediting	A =	58,386 sf
Vbf-pre=Q(1/12)Area	Vbf-pre =	2,036 cf

W4: STANDARD METHOD RUNOFF VOLUME CALCULATION

Pervious Cover Post-Development Bankfull Runoff Calculatios (Vbf-per-post)

2 yr/24 hr storm event	P=	2.35 in
Pervious Cover CN from WS1	CN =	74
S=(1000/CN)-10	S =	3.51 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	0.53 in
Pervious Cover Area from WS1	A =	15,883 sf
Vbf-per-post=Q(1/12)Area	Vbf-per-post =	696 cf

W5: STANDARD METHOD RUNOFF VOLUME CALCULATION

Impervious Cover Post-Development Bankfull Runoff Calculations (Vbf-imp-post)

2 yr/24 hr storm event	P=	2.35 in
Impervious Cover CN from WS1	CN =	98
S=(1000/CN)-10	S =	0.20 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	2.12 in
Impervious Cover Area from WS1	A =	42,503 sf
Vbf-imp-post=Q(1/12)Area	Vbf-imp-post =	7,515 cf

W6: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-per-post)

100-yr Storm Event	P=	5.11 in
Pervious Cover CN from WS1	CN =	74
S=(1000/CN)-10	S =	3.51 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	2.45 in
Pervious Cover Area from WS1	A =	15,883 sf
V100-per-post=Q(1/12)Area	V100-per-post =	3,246 cf

W7: STANDARD METHOD RUNOFF VOLUME CALCULATION

Impervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-imp-post)

100-yr Storm Event	P=	5.11 in
Impervious Cover CN from WS1	CN =	98
S=(1000/CN)-10	S =	0.20 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	4.87 in
Impervious Cover Area from WS1	A =	42,503 sf
V100-imp-post=Q(1/12)Area	V100-imp-post =	17,260 cf

W8: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Determine Time of Concentration for Applicable Flow Types (Tc-hrs)

Flow Type	K	Change in Elevation	Length (L)	Slope% (S)	S^0.5	V=KS^0.5	Tc=L/3600V
Sheet Flow (<300')	0.48	2	100	2	1.41	0.68	0.04
Waterway	1.2	1	10	10	3.16	3.79	0.00
Waterway	1.2	1	10	10	3.16	3.79	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
				Total Time of Concentration (Tc-hrs)=			0.04

W9: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Runoff Summary & Onsite Infiltration Requirement

Runoff Summary from Previous Worksheets

First Flush	Vff =	3,828 cf	
Pre-development Bankfull Runoff Volume	Vbf-pre =	2,036 cf	
Pervious Cover Post Development Bankfull Volume	Vbf-per-post =	696 cf	Total BF Volume (Vbf-post)
Impervious Cover Post-Development Bankfull Volume	Vbf-imp-post =	7,515 cf	8,211
Pervious Cover Post Development 100-yr Volume	V100-per-post =	3,246 cf	Total100-yr Volume (V100-post)
Impervious Cover Post-Development 100-yr Volume	V100-imp-post =	17,260 cf	20,506

Determine Onsite Infiltration Requirement

Subtract the Pre-Development Bankfull from the Post-Development Bankfull olume

Total Post Development Bankfull Volume	Vbf-post=	8,211 cf
Pre-devlopment Bankfull Runoff Volume	Vbf-pre=	2,036 cf
Bankfull Volume Difference		6,175 cf

Compare Bankfull Volume Difference with the First Flush Volume.

Bankfull Volume Difference =	6,175 cf	greater
First Flush Volume =	3,828 cf	
Onsite Infiltration Requiement (Vinf)	Vinf =	6,175 cf

W10: STANDARD METHOD RUNOFF VOLUME CALCULATION

Detention/Retention Requirement

Detention

Qp=238.6Tc^-.82	Qp=	3,232.69 cfs/in-mi^2
Total Site Area Excluding Self Crediting	A =	1.34 ac
Q100=Q100-per+Q100-imp (W6 and W7)	Q100 =	7.33 in
Peak Flow (PF)=Qp*Q100*A/640	PF=	49.59 cfs
D=PF-.15*A	D=	49.39 cfs
Vdet=(D/PF)*V100	Vdet=	20,422 cf
Vdet=(D/PF)*V100-Vinf	Vdet-Vinf=	14,247 cf

W11: STANDARD METHOD RUNNOFF CALCULATIONS

Determine Applicable BMPs and Associated Volume Credits allowed to be Calculated w/ Infiltration

Proposed BMP	Area (sf)	Storage Volume (cf)	Ave. Design Infiltration Rate (in/hr)	Infiltration Volume During Storm (cf)	Total Volume Reduction (cf)
Porous Pavement					
Infiltration Basin	2,237	4,849	16.88	18,875	23,723
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden					
Bioretention					
Total Volume Reduction Credit by BMPs =				18,875	23,723 cf

W13: SUMMARY

Minimum On Site Infiltration Requirement Vinf =	6,175 cf
Design/Provided Infiltration Volume =	18,875 cf
% Minimum Required Infiltration Provided =	305.66 %
Total Calculated Detention Volume Vdet =	20,422 cf
Net Required Detention Volume =	1,548 cf
% Required Infiltration Not Provided =	-205.66 %
Net % Penalty	0.00 %

Infiltratin Basin WCWRC Section V pg 76

Area at Ponding Depth =	3,173 sf		
Area of Garden at Bottom =	1,301 sf		
Infiltration Area =	2,237 sf		
Surface Storage Volume = Area*Depth	Area =	2,237 sf	
	Depth =	2.00 ft	
	Volume =	4474 cf	
Soil Storage Volume = length*width*depth*void ratio	Area =	2,237 sf	
	Depth =	0.67 ft	
	Voids =	0.25	
	Volume =	375 cf	
Infiltration Volume = Area*infiltration rate*6 hr*1'/12"	Area =	2,237 sf	
	Infiltration Rate =	33.75 in/hr	33.75 Ave of TP 1 & 3
	Infiltration Rate w/ Safety Factor 2 =	16.88 in/hr	
	Infiltration Period	6.00 hr	
	Infiltration Volume =	18,875 cf	
	Total Infiltration Basin =	23723 cf	

PARKING LOT ONLY TO CALC FOREBAY

Total Site Area =	0.51 ac	22,310	
Total Site Area Excluding "Self-Crediting" BMPs =			0.51 ac

W1: POST EDVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS AND RUNOFF COEFFICIENTS

Rational Method Variables

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	(C)(Area)
Building Roof	B	0	0.000	0.95	0.00
Concrete & Wall	B	0	0.000	0.95	0.00
Pavement	B	22,310	0.512	0.95	0.49
Road	B	0	0.000	0.95	0.00
Pervious	B	0	0.000	0.35	0.00
Rain Garden	B	0	0.000	0.95	0.00
		22,310	Total = Sum (C)(A)		0.49
			Area Total = Sum A (ac)		0.51
		Weighted C = Sum (C)(A)/Area Total			0.95

NRCS Variables Pervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Lawn	B	0	0.000	74	0
Rain Garden	B	0	0.000	98	0
Pervious Pavement	B	0	0.000	89	0
			Total = Sum (CN)(A)		0.00
			Area Total = Sum A (ac)		0.00
		Weighted CN = Sum (CN)(A)/Area Total			74

NRCS Variables Impervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Building Roof	B	0	0.000	98	0
Concrete	B	0	0.000	98	0
Pavement	B	22,310	0.512	98	50
Rain Garden	B	0	0.000	98	0
			Total = Sum (CN)(A)		50.19
			Area Total = Sum A (ac)		0.51
		Weighted CN = Sum (CN)(A)/Area Total			98

W6: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-per-post)

100-yr Storm Event	P=	5.11 in
Pervious Cover CN from WS1	CN =	74
S=(1000/CN)-10	S =	3.51 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	2.45 in
Pervious Cover Area from WS1	A =	0 sf
V100-per-post=Q(1/12)Area	V100-per-post =	0 cf

W7: STANDARD METHOD RUNOFF VOLUME CALCULATION

Impervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-imp-post)

100-yr Storm Event	P=	5.11 in
Impervious Cover CN from WS1	CN =	98
S=(1000/CN)-10	S =	0.20 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	4.87 in
Impervious Cover Area from WS1	A =	22,310 sf
V100-imp-post=Q(1/12)Area	V100-imp-post =	9,060 cf

W8: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Determine Time of Concentration for Applicable Flow Types (Tc-hrs)

Flow Type	K	Change in Elevation	Length (L)	Slope% (S)	S^0.5	V=KS^0.5	Tc=L/3600V
Sheet Flow (<300')	0.48	2	100	2	1.41	0.68	0.04
Waterway	1.2	1	10	10	3.16	3.79	0.00
Waterway	1.2	1	10	10	3.16	3.79	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
				Total Time of Concentration (Tc-hrs)=			0.04

W9: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Runoff Summary & Onsite Infiltration Requirement

Runoff Summary from Previous Worksheets

First Flush	Vff =	1,766 cf	
Pre-development Bankfull Runoff Volume	Vbf-pre =	778 cf	
Pervious Cover Post Development Bankfull Volume	Vbf-per-post =	0 cf	Total BF Volume (Vbf-post)
Impervious Cover Post-Development Bankfull Volume	Vbf-imp-post =	3,945 cf	3,945
Pervious Cover Post Development 100-yr Volume	V100-per-post =	0 cf	Total100-yr Volume (V100-post)
Impervious Cover Post-Development 100-yr Volume	V100-imp-post =	9,060 cf	9,060

W10: STANDARD METHOD RUNOFF VOLUME CALCULATION

Detention/Retention Requirement

Detention

Qp=238.6Tc^-.82	Qp=	3,232.69 cfs/in-mi^2
Total Site Area Excluding Self Crediting	A =	0.51 ac
Q100=Q100-per+Q100-imp (W6 and W7)	Q100 =	7.33 in
Peak Flow (PF)=Qp*Q100*A/640	PF=	18.95 cfs
D=PF-.15*A	D=	18.87 cfs
Vdet=(D/PF)*V100	Vdet=	9,023 cf
Vdet=(D/PF)*V100-Vinf	Vdet-Vinf=	5,856 cf

Required Forebay Volume = Required Detention (Parking Lot) * 0.05 =	Vfb=	451

Forebay

Area at Ponding Depth =	82 sf	
Area of Garden at Bottom =	0 sf	
Infiltration Area =	41 sf	
Surface Storage Volume = Area*Depth	Area =	41 sf
	Depth =	1.00 ft
	Volume =	41 cf
Soil Storage Volume = length*width*depth*void ratio	Area =	41 sf
	Depth =	0.67 ft
	Voids =	0.25
	Volume =	7 cf
Infiltration Volume = Area*infiltration rate*6 hr*1'/12"	Area =	41 sf
	Infiltration Rate =	33.75 in/hr
	Infiltration Rate w/ Safety Factor 2 =	16.88 in/hr
	Infiltration Period	6.00 hr
	Infiltration Volume =	346 cf
	Forebay =	394 cf

PROPOSED AREA TO RAIN GARDEN

Total Site Area =	0.41 ac	18067	
Total Site Area Excluding "Self-Crediting" BMPs =			0.41 ac

W1: POST EDVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS AND RUNOFF COEFFICIENTS

Rational Method Variables

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	(C)(Area)
Building Roof	B	9,284	0.213	0.95	0.20
Concrete	B	454	0.010	0.95	0.01
Pavement	B	0	0.000	0.95	0.00
Road	B	0	0.000	0.95	0.00
Pervious	B	7,238	0.166	0.35	0.06
Rain Garden	B	1,091	0.025	0.95	0.02
		18,067	Total = Sum (C)(A)		0.29
			Area Total = Sum A (ac)		0.41
		Weighted C = Sum (C)(A)/Area Total			0.71

NRCS Variables Pervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Lawn	B	7,238	0.166	74	12
Rain Garden	B	1,091	0.025	98	2
Pervious Pavement	B	0	0.000	89	0
			Total = Sum (CN)(A)		14.75
			Area Total = Sum A (ac)		0.19
		Weighted CN = Sum (CN)(A)/Area Total			77

NRCS Variables Impervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Building Roof	B	9,284	0.213	98	21
Concrete	B	454	0.010	98	1
Pavement	B	0	0.000	98	0
Rain Garden	B	0	0.000	98	0
		9,738	Total = Sum (CN)(A)		21.91
			Area Total = Sum A (ac)		0.22
		Weighted CN = Sum (CN)(A)/Area Total			98

W2: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

First Flush Runoff Calculations (Vff)

Vff=(1")(1'/12")(43560sf/1ac)AC =	Vff =	1,068 cf

W3: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pre\development Bankfull Runoff Calculations (Vbf-pre)

2 yr/24 hr storm event	P=	2.35 in
Pre-devlopment Land Cover	CN =	71
S=(1000/CN)-10	S =	4.08 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	0.42 in
Total site area (sf) excluding self crediting	A =	18,067 sf
Vbf-pre=Q(1/12)Area	Vbf-pre =	630 cf

W4: STANDARD METHOD RUNOFF VOLUME CALCULATION

Pervious Cover Post-Development Bankfull Runoff Calculatios (Vbf-per-post)

2 yr/24 hr storm event	P=	2.35 in
Pervious Cover CN from WS1	CN =	77
S=(1000/CN)-10	S =	2.96 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	0.65 in
Pervious Cover Area from WS1	A =	8,329 sf
Vbf-per-post=Q(1/12)Area	Vbf-per-post =	454 cf

W5: STANDARD METHOD RUNOFF VOLUME CALCULATION

Impervious Cover Post-Development Bankfull Runoff Calculations (Vbf-imp-post)

2 yr/24 hr storm event	P=	2.35 in
Impervious Cover CN from WS1	CN =	98
S=(1000/CN)-10	S =	0.20 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	2.12 in
Impervious Cover Area from WS1	A =	9,738 sf
Vbf-imp-post=Q(1/12)Area	Vbf-imp-post =	1,722 cf

W6: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-per-post)

100-yr Storm Event	P=	5.11 in
Pervious Cover CN from WS1	CN =	77
S=(1000/CN)-10	S =	2.96 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	2.73 in
Pervious Cover Area from WS1	A =	8,329 sf
V100-per-post=Q(1/12)Area	V100-per-post =	1,894 cf

W7: STANDARD METHOD RUNOFF VOLUME CALCULATION

Impervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-imp-post)

100-yr Storm Event	P=	5.11 in
Impervious Cover CN from WS1	CN =	98
S=(1000/CN)-10	S =	0.20 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	4.87 in
Impervious Cover Area from WS1	A =	9,738 sf
V100-imp-post=Q(1/12)Area	V100-imp-post =	3,954 cf

W8: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Determine Time of Concentration for Applicable Flow Types (Tc-hrs)

Flow Type	K	Change in Elevation	Length (L)	Slope% (S)	S^0.5	V=KS^0.5	Tc=L/3600V
Sheet Flow (<300')	0.48	2	100	2	1.41	0.68	0.04
Waterway	1.2	1	10	10	3.16	3.79	0.00
Waterway	1.2	1	10	10	3.16	3.79	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
				Total Time of Concentration (Tc-hrs)=			0.04

W9: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Runoff Summary & Onsite Infiltration Requirement

Runoff Summary from Previous Worksheets

First Flush	Vff =	1,068 cf	
Pre-development Bankfull Runoff Volume	Vbf-pre =	630 cf	
Pervious Cover Post Development Bankfull Volume	Vbf-per-post =	454 cf	Total BF Volume (Vbf-post)
Impervious Cover Post-Development Bankfull Volume	Vbf-imp-post =	1,722 cf	2,176
Pervious Cover Post Development 100-yr Volume	V100-per-post =	1,894 cf	Total100-yr Volume (V100-post)
Impervious Cover Post-Development 100-yr Volume	V100-imp-post =	3,954 cf	5,848

Determine Onsite Infiltration Requirement

Subtract the Pre-Development Bankfull from the Post-Development Bankfull olume

Total Post Development Bankfull Volume	Vbf-post=	2,176 cf
Pre-devlopment Bankfull Runoff Volume	Vbf-pre=	630 cf
Bankfull Volume Difference		1,546 cf

Compare Bankfull Volume Difference with the First Flush Volume.

Bankfull Volume Difference =	1,546 cf	greater
First Flush Volume =	1,068 cf	
Onsite Infiltration Requiement (Vinf)	Vinf =	1,546 cf

W10: STANDARD METHOD RUNOFF VOLUME CALCULATION

Detention/Retention Requirement

Detention

Qp=238.6Tc^-.82	Qp=	3,232.69 cfs/in-mi^2
Total Site Area Excluding Self Crediting	A =	0.41 ac
Q100=Q100-per+Q100-imp (W6 and W7)	Q100 =	7.60 in
Peak Flow (PF)=Qp*Q100*A/640	PF=	15.92 cfs
D=PF-.15*A	D=	15.86 cfs
Vdet=(D/PF)*V100	Vdet=	5,825 cf
Vdet=(D/PF)*V100-Vinf	Vdet-Vinf=	4,279 cf

W11: STANDARD METHOD RUNNOFF CALCULATIONS

Determine Applicable BMPs and Associated Volume Credits allowed to be Calculated w/ Infiltration

Proposed BMP	Area (sf)	Storage Volume (cf)	Ave. Design Infiltration Rate (in/hr)	Infiltration Volume During Storm (cf)	Total Volume Reduction (cf)
Porous Pavement					
Infiltration Basin					
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden	1,091	914	12.50	6,819	7,732.4625
Bioretention					
Total Volume Reduction Credit by BMPs =					7,732 cf

W13: SUMMARY

Minimum On Site Infiltration Requirement Vinf =	1,511 cf
Design/Provided Infiltration Volume =	6,819 cf
% Minimum Required Infiltration Provided =	451.24 %
Total Calculated Detention Volume Vdet =	5,752 cf
Net Required Detention Volume =	-1,066 cf
% Required Infiltration Not Provided =	-351.24 %
Net % Penalty	0.00 %

Rain Garden

Area at Ponding Depth =	1,326 sf	
Area of Garden at Bottom =	856 sf	
Infiltration Area =	1,091 sf	
Surface Storage Volume = Area*Depth	Area =	1,091 sf
	Depth =	0.67 ft
	Volume =	731 cf
Soil Storage Volume = length*width*depth*void ratio	Area =	1,091 sf
	Depth =	0.67 ft
	Voids =	0.25
	Volume =	183 cf
Infiltration Volume = Area*infiltration rate*6 hr*1'/12"	Area =	1,091 sf
	Infiltration Rate =	25.00 in/hr
	Infiltration Rate w/ Safety Factor 2 =	12.50 in/hr
	Infiltration Period	6.00 hr
	Infiltration Volume =	6,819 cf
	Total Rain Garden Volume =	7732 cf

DETENTION REQUIRED FOR ROOF INFILTRATION BASIN 1

Total Site Area =	0.36 ac	15571	
Total Site Area Excluding "Self-Crediting" BMPs =			0.36 ac

W1: POST EDVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS AND RUNOFF COEFFICIENTS

Rational Method Variables

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	(C)(Area)
Building Roof	B	7,705	0.177	0.95	0.17
Concrete	B	573	0.013	0.95	0.01
Pavement	B	0	0.000	0.95	0.00
Deck	B	1,327	0.030	0.35	0.01
Pervious	B	5,966	0.137	0.35	0.05
Rain Garden	B	0	0.000	0.95	0.00
		15,571	Total = Sum (C)(A)		0.24
			Area Total = Sum A (ac)		0.36
		Weighted C = Sum (C)(A)/Area Total			0.67

NRCS Variables Pervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Lawn	B	5,966	0.137	74	10
Rain Garden	B	0	0.000	98	0
Deck	B	1,327	0.030	74	2
			Total = Sum (CN)(A)		12.39
			Area Total = Sum A (ac)		0.17
		Weighted CN = Sum (CN)(A)/Area Total			74

NRCS Variables Impervious

Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
Building Roof	B	7,705	0.177	98	17
Concrete	B	573	0.013	98	1
Pavement	B	0	0.000	98	0
Rain Garden	B	0	0.000	98	0
			Total = Sum (CN)(A)		18.62
			Area Total = Sum A (ac)		0.19
		Weighted CN = Sum (CN)(A)/Area Total			98

W2: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

First Flush Runoff Calculations (Vff)

Vff=(1")(1'/12")(43560sf/1ac)AC =	Vff =	868 cf

W3: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pre\development Bankfull Runoff Calculations (Vbf-pre)

2 yr/24 hr storm event	P=	2.35 in
Pre-devlopment Land Cover	CN =	71
S=(1000/CN)-10	S =	4.08 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	0.42 in
Total site area (sf) excluding self crediting	A =	15,571 sf
Vbf-pre=Q(1/12)Area	Vbf-pre =	543 cf

W4: STANDARD METHOD RUNOFF VOLUME CALCULATION

Pervious Cover Post-Development Bankfull Runoff Calculatios (Vbf-per-post)

2 yr/24 hr storm event	P=	2.35 in
Pervious Cover CN from WS1	CN =	74
S=(1000/CN)-10	S =	3.51 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	0.53 in
Pervious Cover Area from WS1	A =	7,293 sf
Vbf-per-post=Q(1/12)Area	Vbf-per-post =	320 cf

W5: STANDARD METHOD RUNOFF VOLUME CALCULATION

Impervious Cover Post-Development Bankfull Runoff Calculations (Vbf-imp-post)

2 yr/24 hr storm event	P=	2.35 in
Impervious Cover CN from WS1	CN =	98
S=(1000/CN)-10	S =	0.20 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	2.12 in
Impervious Cover Area from WS1	A =	8,278 sf
Vbf-imp-post=Q(1/12)Area	Vbf-imp-post =	1,464 cf

W6: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-per-post)

100-yr Storm Event	P=	5.11 in
Pervious Cover CN from WS1	CN =	74
S=(1000/CN)-10	S =	3.51 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	2.45 in
Pervious Cover Area from WS1	A =	7,293 sf
V100-per-post=Q(1/12)Area	V100-per-post =	1,490 cf

W7: STANDARD METHOD RUNOFF VOLUME CALCULATION

Impervious Cover Post-Development 100-yr Storm Runoff Calculations (V100-imp-post)

100-yr Storm Event	P=	5.11 in
Impervious Cover CN from WS1	CN =	98
S=(1000/CN)-10	S =	0.20 in
Q=(P-0.2S)^2/(P+0.8S)	Q =	4.87 in
Impervious Cover Area from WS1	A =	8,278 sf
V100-imp-post=Q(1/12)Area	V100-imp-post =	3,362 cf

W8: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Determine Time of Concentration for Applicable Flow Types (Tc-hrs)

Flow Type	K	Change in Elevation	Length (L)	Slope% (S)	S^0.5	V=KS^0.5	Tc=L/3600V
Sheet Flow (<300')	0.48	2	100	2	1.41	0.68	0.04
Waterway	1.2	1	10	10	3.16	3.79	0.00
Waterway	1.2	1	10	10	3.16	3.79	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
Small Tributary	2.1	1	10	10	3.16	6.64	0.00
				Total Time of Concentration (Tc-hrs)=			0.04

W9: STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Runoff Summary & Onsite Infiltration Requirement

Runoff Summary from Previous Worksheets

First Flush	Vff =	868 cf	
Pre-development Bankfull Runoff Volume	Vbf-pre =	543 cf	
Pervious Cover Post Development Bankfull Volume	Vbf-per-post =	320 cf	Total BF Volume (Vbf-post)
Impervious Cover Post-Development Bankfull Volume	Vbf-imp-post =	1,464 cf	1,783
Pervious Cover Post Development 100-yr Volume	V100-per-post =	1,490 cf	Total100-yr Volume (V100-post)
Impervious Cover Post-Development 100-yr Volume	V100-imp-post =	3,362 cf	4,852

Determine Onsite Infiltration Requirement

Subtract the Pre-Development Bankfull from the Post-Development Bankfull olume

Total Post Development Bankfull Volume	Vbf-post=	1,783 cf
Pre-devlopment Bankfull Runoff Volume	Vbf-pre=	543 cf
Bankfull Volume Difference		1,240 cf

Compare Bankfull Volume Difference with the First Flush Volume.

Bankfull Volume Difference =	1,240 cf	greater
First Flush Volume =	868 cf	
Onsite Infiltration Requiement (Vinf)	Vinf =	1,240 cf

W10: STANDARD METHOD RUNOFF VOLUME CALCULATION

Detention/Retention Requirement

Detention

Qp=238.6Tc^-.82	Qp=	3,232.69 cfs/in-mi^2
Total Site Area Excluding Self Crediting	A =	0.36 ac
Q100=Q100-per+Q100-imp (W6 and W7)	Q100 =	7.33 in
Peak Flow (PF)=Qp*Q100*A/640	PF=	13.23 cfs
D=PF-.15*A	D=	13.17 cfs
Vdet=(D/PF)*V100	Vdet=	4,832 cf
Vdet=(D/PF)*V100-Vinf	Vdet-Vinf=	3,592 cf

W11: STANDARD METHOD RUNNOFF CALCULATIONS

Determine Applicable BMPs and Associated Volume Credits allowed to be Calculated w/ Infiltration

Proposed BMP	Area (sf)	Storage Volume (cf)	Ave. Design Infiltration Rate (in/hr)	Infiltration Volume During Storm (cf)	Total Volume Reduction (cf)
Porous Pavement					
Infiltration Basin	717	837	20.00	7,165	8,002
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden					
Bioretention					
Total Volume Reduction Credit by BMPs =				7,165	8,002 cf

Infiltration Basin

Area at Ponding Depth =	1,120 sf	
Area of Garden at Bottom =	313 sf	
Infiltration Area =	717 sf	
Surface Storage Volume = Area*Depth	Area =	717 sf
	Depth =	1.00 ft
	Volume =	717 cf
Soil Storage Volume = length*width*depth*void ratio	Area =	717 sf
	Depth =	0.67 ft
	Voids =	0.25
	Volume =	120 cf
Infiltration Volume = Area*infiltration rate*6 hr*1'/12"	Area =	717 sf
	Infiltration Rate =	42.50 in/hr
	Infiltration Rate w/ Safety Factor 2 =	20.00 in/hr
	Infiltration Period	6.00 hr
	Infiltration Volume =	7,165 cf
	Total Infiltration Basin =	8002 cf

W13: SUMMARY

Minimum On Site Infiltration Requirement Vinf =	1,240 cf
Design/Provided Infiltration Volume =	7,165 cf
% Minimum Required Infiltration Provided =	577.70 %
Total Calculated Detention Volume Vdet =	4,832 cf
Net Required Detention Volume =	-2,333 cf
% Required Infiltration Not Provided =	-477.70 %
Net % Penalty	0.00 %

811 Know what's **below.** **Call** before you dig.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

Macon Engineering, LLC.

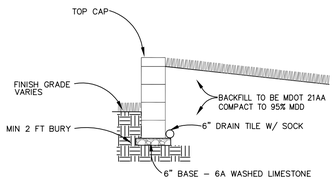
PO Box 314, Chelsea, MI 48118 734-216-9941

GRAND STREET
DEXTER, MI

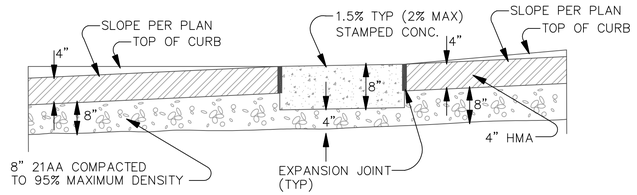
PRELIMINARY SITE PLAN
STORM WATER CALCULATIONS

STATE OF MICHIGAN
KATHY KEINATH
ENGINEER
No. 49052
REGISTERED PROFESSIONAL ENGINEER

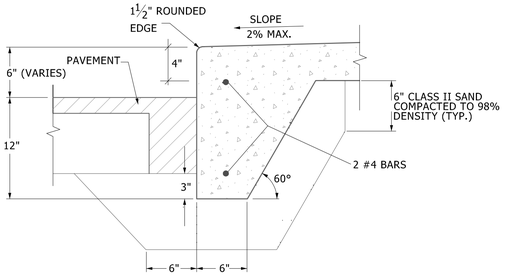
	7-11-23
DATE	5-5-23
SCALE	1"=30'
SHEET NO.	PSP-10



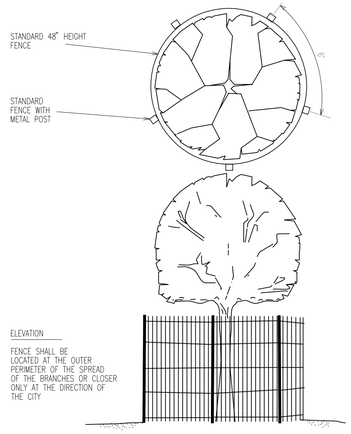
8" COMPAC KEYSTONE RETAINING WALL



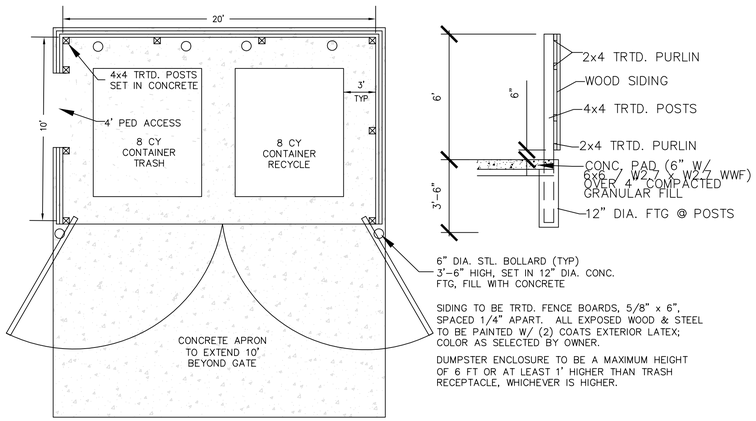
CROSSWALK



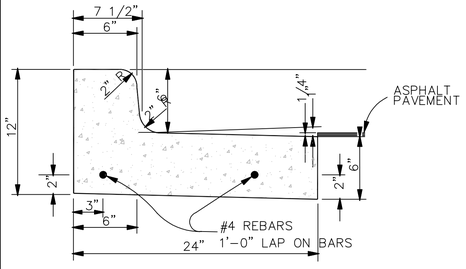
THICKENED EDGE WALK DETAIL

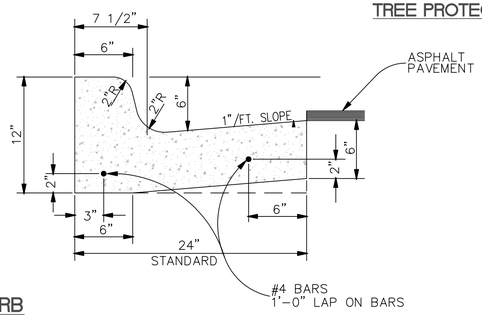


TREE PROTECTION DETAIL

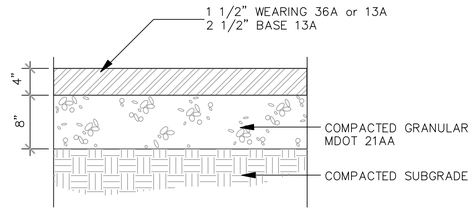


DUMPSTER ENCLOSURE

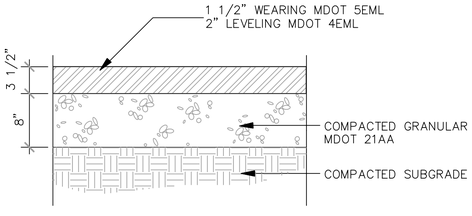




BARRIER CURB

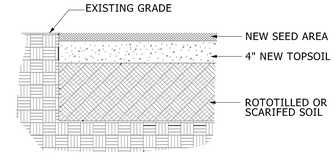


PUBLIC ROAD PAVEMENT

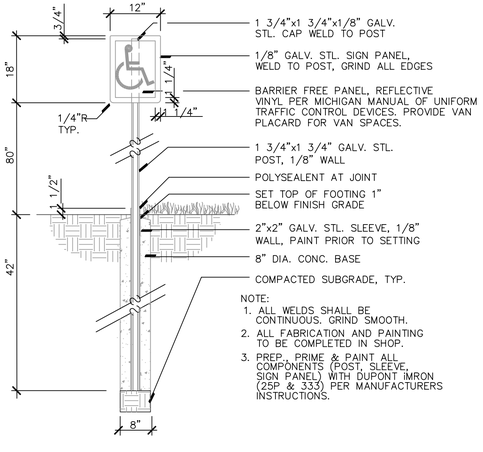


PARKING LOT PAVEMENT

EROSION CONTROL BLANKETS SHALL BE PLACED ON ALL NEWLY SEEDED AREAS WITH SLOPES OF 1V TO 3H OR STEEPER. THE BLANKETS SHALL BE HIGH VELOCITY EXCELSIOR MULCH BLANKETS OR HIGH VELOCITY STRAW MULCH BLANKETS. NET ANCHORS SHALLBE PLACED AT MINIMUM INTERVALS OF 30 INCHES ALONG ALL JOINTS UNLESS MANUFACTURER'S RECOMMENDATIONS REQUIRE CLOSER SPACING.

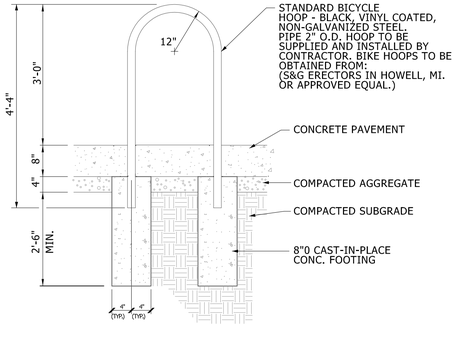


NEW SEEDED AREA

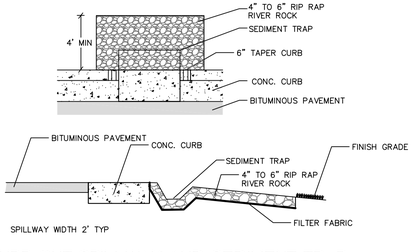


NOTE:
1. ALL WELDS SHALL BE CONTINUOUS. GRIND SMOOTH.
2. ALL FABRICATION AND PAINTING TO BE COMPLETED IN SHOP.
3. PREP, PRIME & PAINT ALL COMPONENTS (POST, SLEEVE, SIGN PANEL) WITH DUPONT IMRON (25P & 333) PER MANUFACTURERS INSTRUCTIONS.

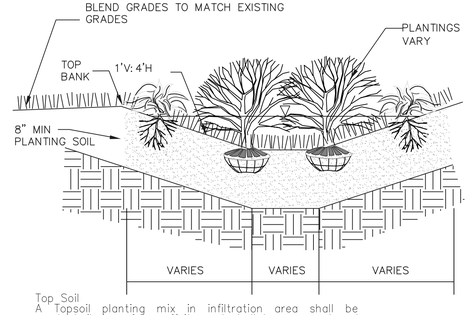
BARRIER FREE PARKING SIGN



BICYCLE HOOP DETAIL



CURB CUT SPILLWAY AND SEDIMENT TRAP



Top Soil
A Topsoil planting mix in infiltration area shall be stockpiled or from offsite and shall be screened and meet the following criteria:
pH range between 5.5 - 6.5
organic content between 5 and 30%
sand 30-50%
clay content less than 5%

RAIN GARDEN/INFILTRATION BASIN CROSS-SECTION

Macon Engineering, LLC.
PO Box 314, Chelsea, MI 48118 734-216-9941

Know what's below. Call before you dig.

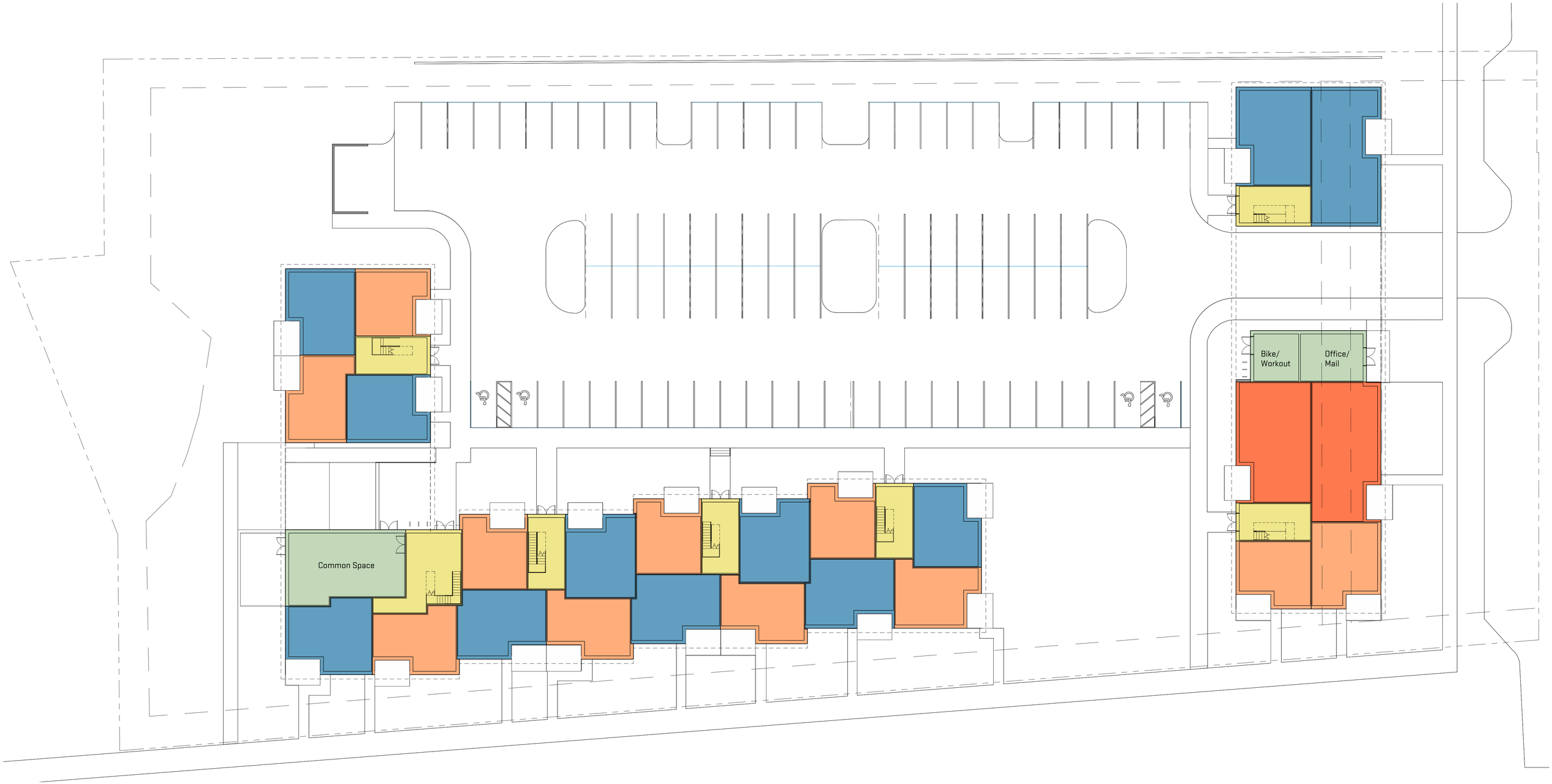
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

GRAND STREET
DEXTER, MI

FINAL SITE PLAN
SITE DETAILS

.\\..\admin\stamp and sign for dwg.tif

DATE	7-11-23 5-5-23
SCALE	N.T.S.
SHEET NO.	PSP-11



LEVEL 1

North

Scale: 1" = 16'-0"

8' 16' 32'

Scales listed are for 22x34 drawing size

ROOM TYPE KEY

- Efficiency
- 1 Bed
- 2 Bed
- Circulation
- Common

Counts:

Unit Count	**76**
Efficiency - approx.600 sf	30
1 Bedroom - approx. 800 sf	30
2 Bedroom - approx. 1200 sf	16

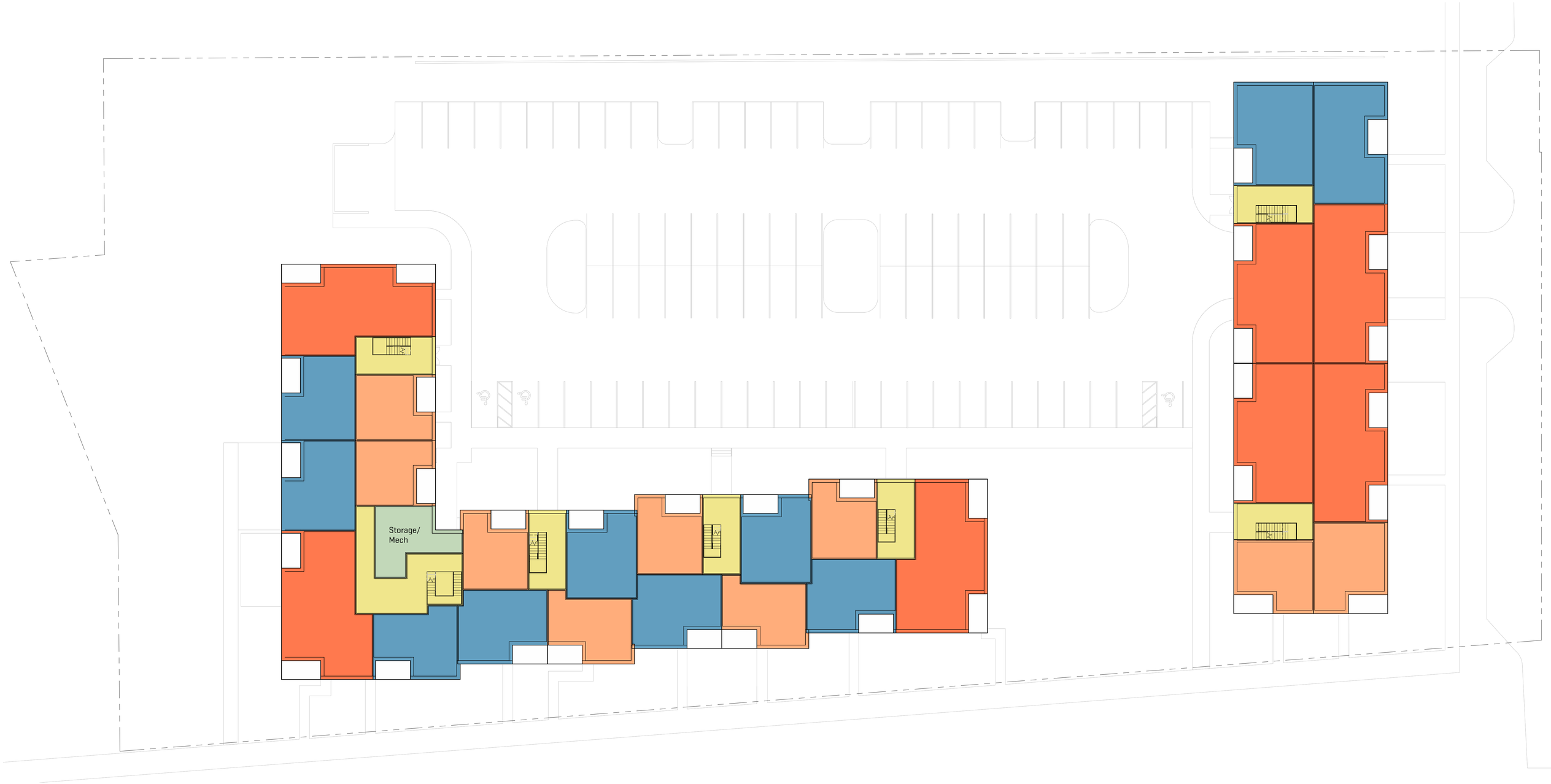
DMF22 - 7965 Grand Street - Mill Creek Flats

Conceptual Level 1 Floor Plan

7965 Grand Street, Dexter, MI 48130
Created on: July 13, 2023

OX STUDIO INC.

A - 1



LEVEL 2

North

Scale: 1" = 16'-0"

8' 16' 32'

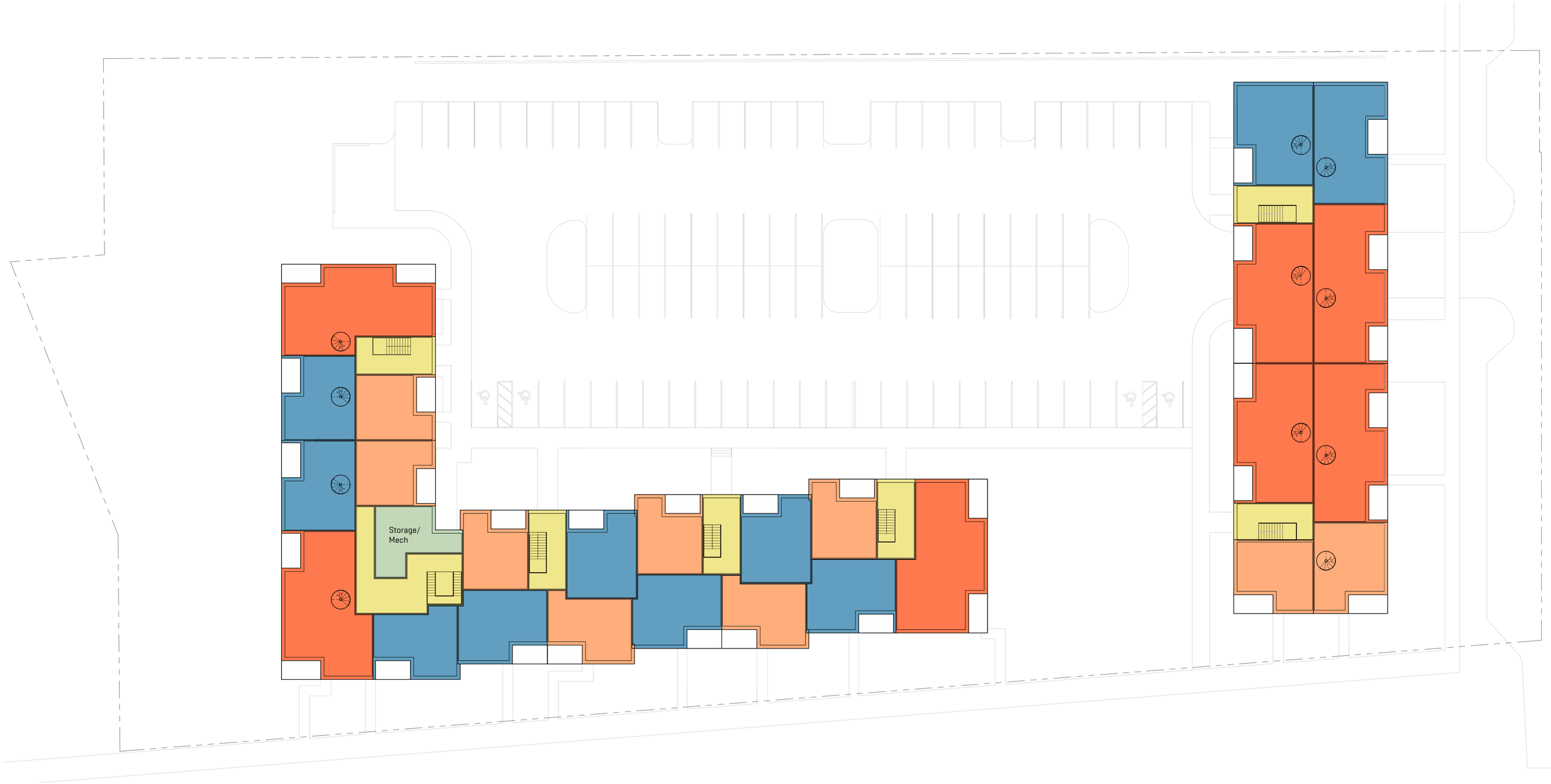
Scales listed are for 22x34 drawing size

ROOM TYPE KEY

- Efficiency
- 1 Bed
- 2 Bed
- Circulation
- Common

Counts:

Unit Count	**76**
Efficiency - approx.600 sf	30
1 Bedroom - approx. 800 sf	30
2 Bedroom - approx. 1200 sf	16



LEVEL 3

North

Scale: 1" = 16'-0"

8' 16' 32'

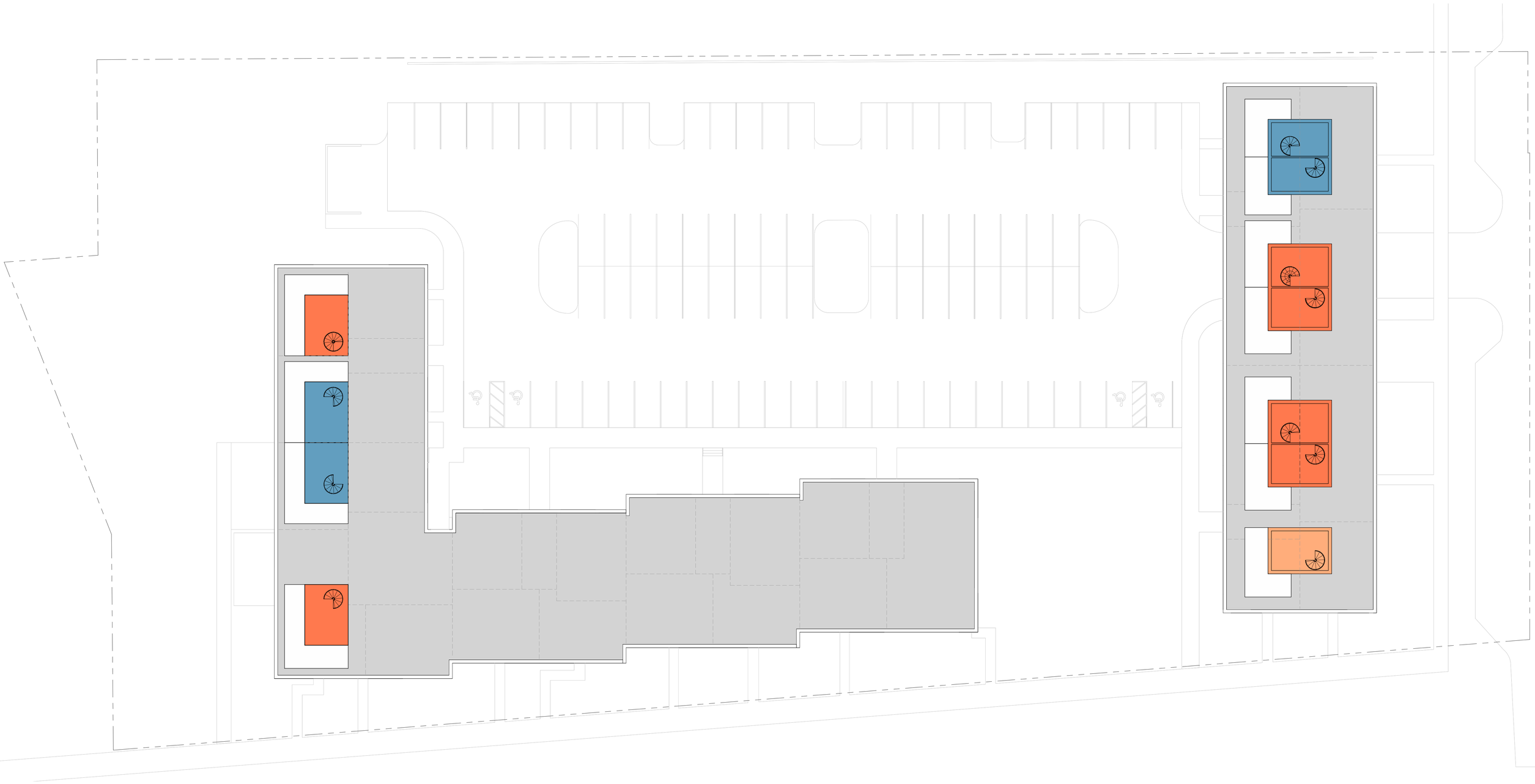
Scales listed are for 22x34 drawing size

ROOM TYPE KEY

- Efficiency
- 1 Bed
- 2 Bed
- Circulation
- Common

Counts:

Unit Count	**76**
Efficiency - approx.600 sf	30
1 Bedroom - approx. 800 sf	30
2 Bedroom - approx. 1200 sf	16



LEVEL - PENTHOUSE

North

Scale: 1" = 16'-0"

8' 16' 32'

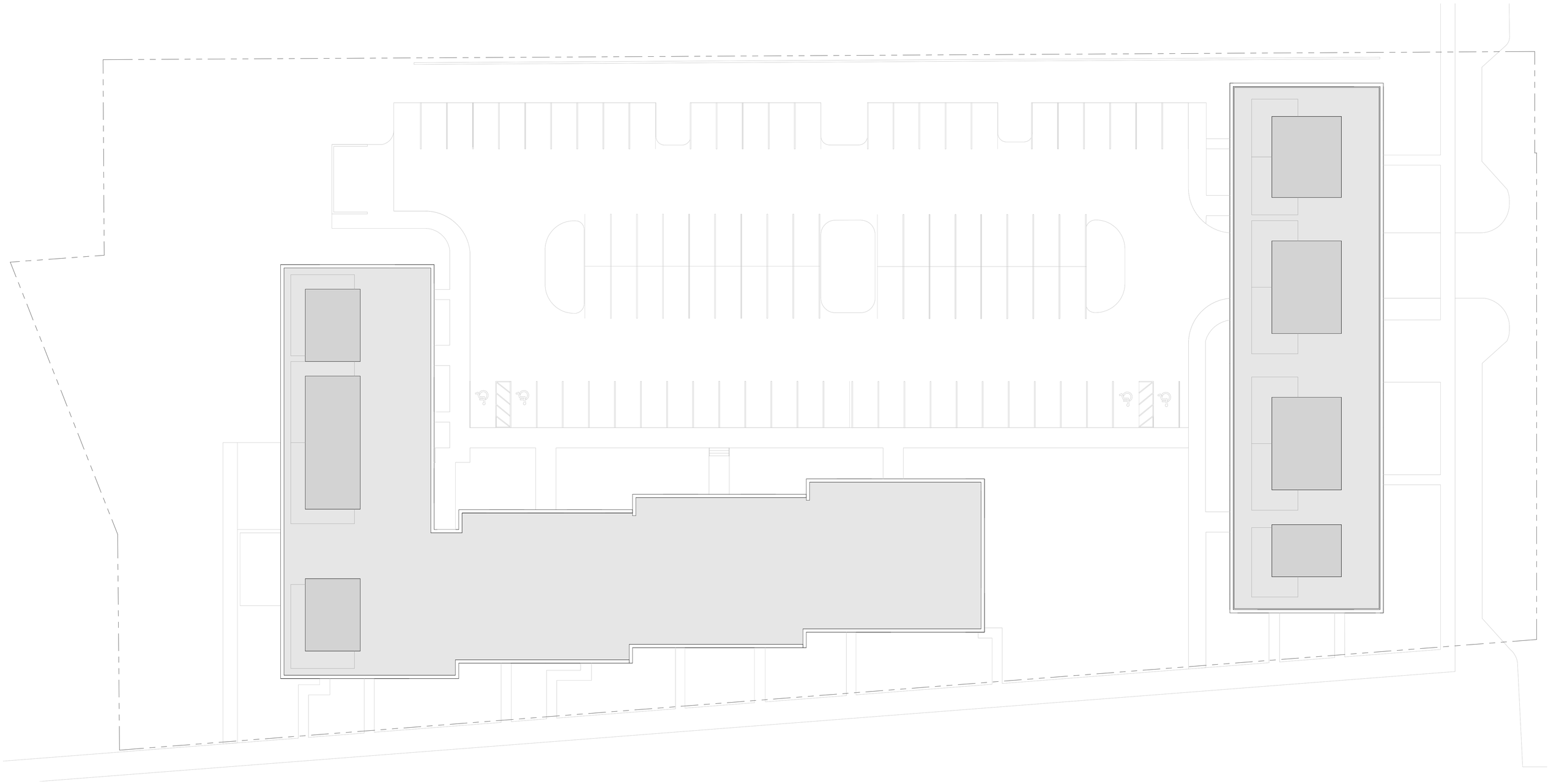
Scales listed are for 22x34 drawing size

ROOM TYPE KEY

- Efficiency
- 1 Bed
- 2 Bed
- Circulation
- Common

Counts:

Unit Count	**76**
Efficiency - approx.600 sf	30
1 Bedroom - approx. 800 sf	30
2 Bedroom - approx. 1200 sf	16



LEVEL - ROOF

North

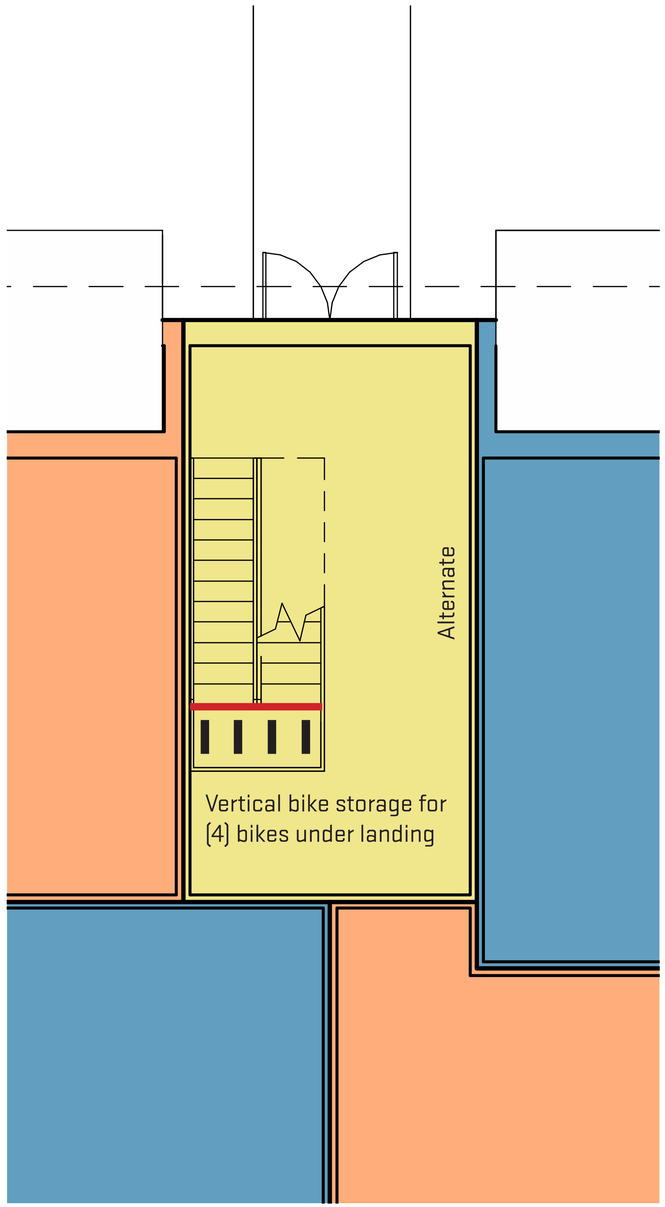
Scale: 1" = 16'-0"

8' 16' 32'

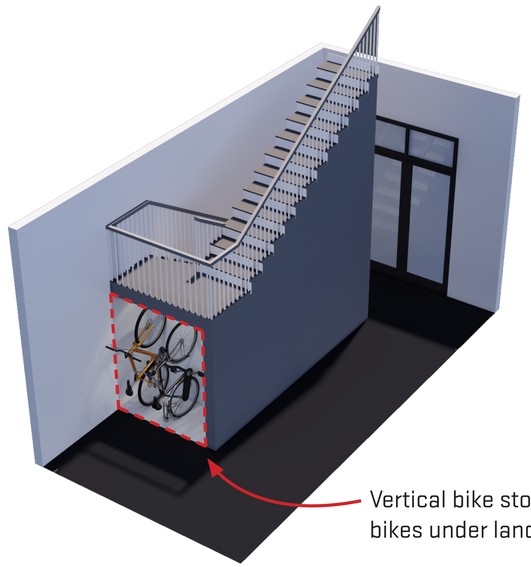
Scales listed are for 22x34 drawing size

ROOM TYPE KEY

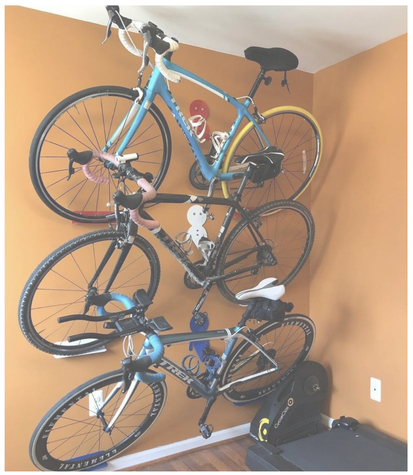
- Efficiency
- 1 Bed
- 2 Bed
- Circulation
- Common

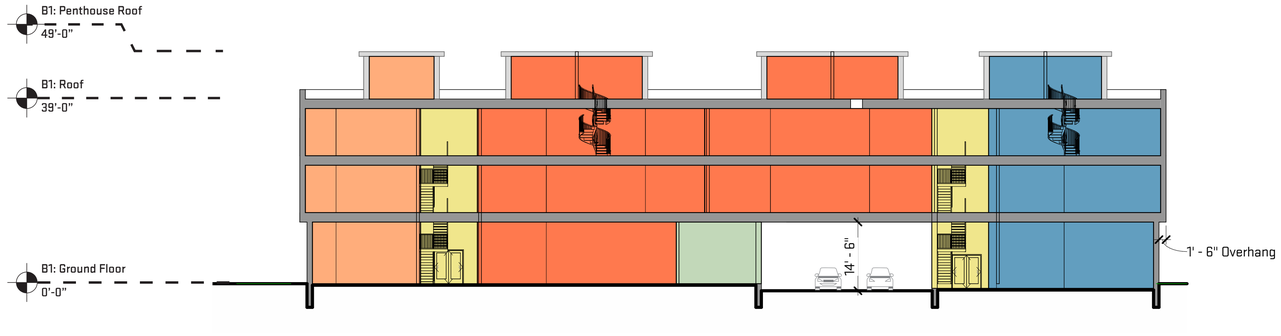


Vertical Bike Storage



Alternate



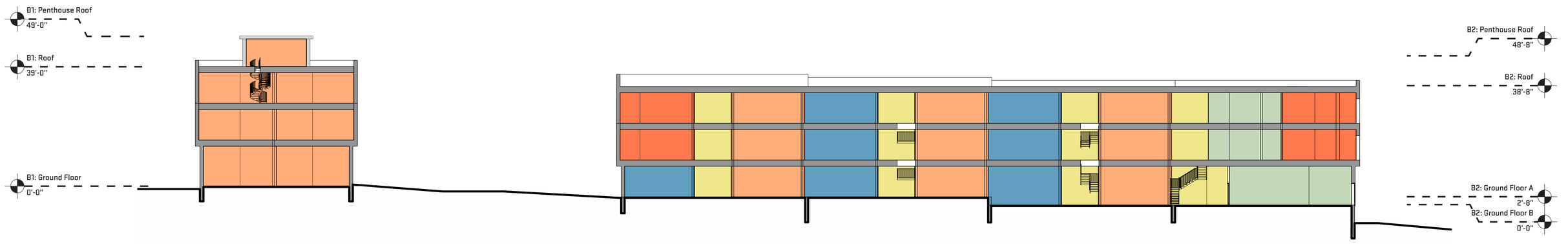


BUILDING "1" - SOUTH ELEVATION

8' 16' 32'

1/16" = 1'-0"

KEY PLAN



BUILDING "2" - NORTH ELEVATION

8' 16' 32'

1/16" = 1'-0"

KEY PLAN

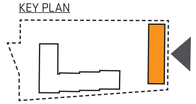
ROOM TYPE KEY

- Efficiency
- 1 Bed
- 2 Bed
- Circulation
- Common

BUILDING "1" - NORTH ELEVATION

1/8" = 1'-0"

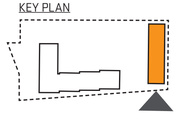
KEY PLAN



BUILDING "1" - EAST ELEVATION

1/8" = 1'-0"

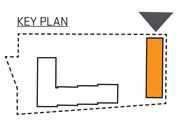
KEY PLAN

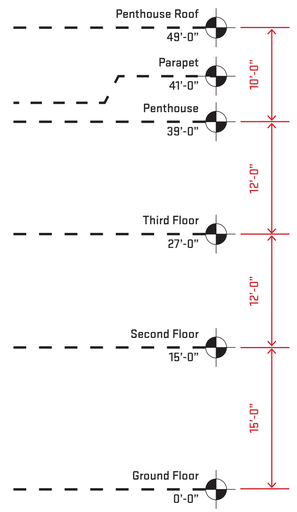


BUILDING "1" - WEST ELEVATION

1/8" = 1'-0"

KEY PLAN





ELEVATION MATERIAL KEY

1. Cementitious Siding | Dark
2. Cementitious Siding | Medium
3. Cementitious Siding | Light
4. Panelized Base
5. Aluminum Clad Casement Window | Black
6. Composite Pergola
7. Metal Railing
8. Aluminum Storefront

Scales listed are for 22x34 drawing size

BUILDING "1" - SOUTH ELEVATION

4' 8' 16'

1/8" = 1'-0"

KEY PLAN

BUILDING "2" - NORTH ELEVATION

4' 8' 16'

1/8" = 1'-0"

KEY PLAN

ELEVATION MATERIAL KEY

1. Cementitious Siding | Dark
2. Cementitious Siding | Medium
3. Cementitious Siding | Light
4. Panelized Base
5. Aluminum Clad Casement Window | Black
6. Composite Pergola
7. Metal Railing
8. Aluminum Storefront

BUILDING "2" - NORTH ELEVATION

4' 8' 16' 1/8" = 1'-0"

KEY PLAN

BUILDING "2" - WEST ELEVATION

4' 8' 16' 1/8" = 1'-0"

KEY PLAN

ELEVATION MATERIAL KEY

1. Cementitious Siding | Dark
2. Cementitious Siding | Medium
3. Cementitious Siding | Light
4. Panelized Base
5. Aluminum Clad Casement Window | Black
6. Composite Pergola
7. Metal Railing
8. Aluminum Storefront

BUILDING "2" - WEST ELEVATION

4' 8' 16'

1/8" = 1'-0"

KEY PLAN

BUILDING "2" - SOUTH ELEVATION

4' 8' 16'

1/8" = 1'-0"

KEY PLAN

ELEVATION MATERIAL KEY

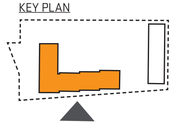
1. Cementitious Siding | Dark
2. Cementitious Siding | Medium
3. Cementitious Siding | Light
4. Panelized Base
5. Aluminum Clad Casement Window | Black
6. Composite Pergola
7. Metal Railing
8. Aluminum Storefront

BUILDING "2" - EAST ELEVATION

4' 8' 16'

1/8" = 1'-0"

KEY PLAN



ELEVATION MATERIAL KEY

1. Cementitious Siding | Dark
2. Cementitious Siding | Medium
3. Cementitious Siding | Light
4. Panelized Base
5. Aluminum Clad Casement Window | Black
6. Composite Pergola
7. Metal Railing
8. Aluminum Storefront